

COAST ARTILLERY JOURNAL



Wishing You a Merry Christmas

NOVEMBER-DECEMBER, 1934

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Notes of the Coast Artillery Association

No Trophies

FOR once the JOURNAL makes its appearance without carrying a notice of the award of a trophy. Usually at this time of the year we are privileged to announce the award of the Association trophy to a regiment of the Regular Army which established the best record in target practice during the previous fiscal year. Because of the shortage of funds for ammunition, many Coast Artillery organizations did not fire a normal target practice during the fiscal year ending June 30, 1934; also, a change in regulations made the target practice year coincide with the calendar year. Several organizations fired a target practice, with reduced ammunition allowance, during the second half of the present calendar year. None of these practices can be considered as normal; also, all organizations were not able to fire, therefore, it would be manifestly unfair to award a trophy to an organization of the Regular Army based on the records of the past year. No trophy will be awarded to a regiment of the Regular Army until the results of the target practice for 1935 have become history. This will probably be some time during the summer of 1936.

/ / /

New Child Joins Family

IT is with great pleasure that we announce the organization of the Cleveland Chapter, U. S. Coast Artillery Association. This Chapter is the youngest member of the family now totaling 20. It was born October 1, 1934, in Room 337, Bulkley Building, Cleveland. Contrary to normal procedure, the child apparently has many parents but we believe that most of the credit for parenthood should go to Colonel T. A. Ryan, 511th C.A. Res. We do not know exactly who the attending physician was, but it appears that a very large and representative gathering was present for the blessed event. The name previously had been selected, hence there seemed to be nothing to do but attend to the christening ceremonies. Of course it was necessary to select a few guardians for the infant to insure its proper nourishment, education and development. The officers selected for this purpose are as follows:

President

Lieutenant Colonel Floyd G. Brightbill, CA-Res.

Vice-President

Captain Harry C. Turnock, CA-Res.

Secretary-Treasurer

Second Lieutenant William P. Carlin, CA-Res.

Executive Council

Captain Harold R. Heminger, CA-Res.

Captain Laughlin T. Hayes, CA-Res.

Major Maurice B. Bradley, CA-Res.

Captain Wesley H. Preyer, CA-Res.

Captain Otto H. Heil, CA-Res.

Colonel Ryan and the efficient Secretary-Treasurer, Lieutenant Carlin, had previously prepared the constitution and by-laws, which were adopted. In addition to the officers mentioned above the following were present and became charter members of the Chapter:

Captain George R. Cunningham, CA-Res.

Captain Joseph P. Jones, CA-Res.

Captain Howard G. Ling, CA-Res.

Captain Clarence S. Raymond, CA-Res.

Captain Merrill D. Spurrier, CA-Res.

Captain Russell O. Utke, CA-Res.

1st Lt. John F. Bennett, CA-Res.

1st Lt. Donald L. Boyd, CA-Res.

1st Lt. R. T. Cunningham, CA-Res.

1st Lt. Charles B. Olds, CA-Res.

1st Lt. Wilber E. Peterson, CA-Res.

1st Lt. Albert H. Veitch, CA-Res.

1st Lt. Murray L. Crawford, CA-Res.

1st Lt. Gabriel E. Drollinger, CA-Res.

1st Lt. Foster B. Hemingway, CA-Res.

1st Lt. Walter R. Kreinheder, CA-Res.

1st Lt. William R. Leis, CA-Res.

1st Lt. John B. McClure, CA-Res.

1st Lt. Clarence K. Winslow, CA-Res.

2nd Lt. Robert T. Anderson, CA-Res.

2nd Lt. Lawrence C. Larden, CA-Res.

2nd Lt. George C. Ruggles, CA-Res.

2nd Lt. Crystal F. Roda, CA-Res.

2nd Lt. Edward F. Peck, CA-Res.

2nd Lt. James V. Dailey, CA-Res.

2nd Lt. Leonard H. Bruce, CA-Res.

2nd Lt. Nelson W. Burch, CA-Res.

2nd Lt. Howard J. Anderson, CA-Res.

2nd Lt. Frank E. Costanzo, CA-Res.

2nd Lt. Charles P. Evans, CA-Res.

2nd Lt. John M. Kamenar, CA-Res.

2nd Lt. Paul M. McCollum, CA-Res.

2nd Lt. Charles L. Ogden, CA-Res.

2nd Lt. Melville M. Pflug, CA-Res.

2nd Lt. Max M. Popernik, CA-Res.

2nd Lt. Martin L. Rutter, CA-Res.

2nd Lt. Arthur C. Sanford, CA-Res.

2nd Lt. Norman R. Seidle, CA-Res.

2nd Lt. Lewis E. Smith, CA-Res.

2nd Lt. James P. Walsh, CA-Res.

The National Association has approved the application of the Cleveland Chapter for a charter. We extend a

hearty and cordial welcome to this precocious child and we wish for it a long, happy and prosperous existence.

1 1 1

Election of Officers

AS remorseless time rolls around with its never ending changes it again becomes necessary for the United States Coast Artillery Association to hold an election of officers. The constitution provides for a total of nine elected members of the Executive Council. At the inception of the Association it was realized that all the members of the Council should not be changed at the same time, therefore, a wise provision was made for the annual replacement of a part of the Council. The officers whose term of office expires on December 31, 1934, are as follows:

Brigadier General J. J. Byrne, N.Y.N.G.

Lieutenant Colonel F. C. Tenney, 955th C.A.-Res.

Lieutenant Colonel E. B. Gray, C.A.C.

Sometime ago the President of the Association appointed a nominating committee to canvass the field and make recommendations for members of the Council to serve a two-year period beginning January 1, 1935. There is no shortage of officers especially well qualified for this important duty. The problem confronting the committee was not to find suitable candidates but to select those who could be easily assembled for the transaction of business; this means that in order to obtain a quorum at least five members of the Council must be resident of Washington. It is desirable that a proper balance be maintained between the Regular Army, National Guard and Organized Reserves; also, that consideration be given to the geographic location of the members. The plan contemplates two representatives from the Organized Reserves, two from the National Guard and five from the Regular Army. Included in the last named category are the president and secretary-treasurer.

After careful consideration the committee appointed by the President of the Association, Major General William F. Hase, has placed the slate, shown on the sample ballot, in nomination.

While the committee has nominated these officers, it should be pointed out that no member of the Association is to be deprived of a voice in the nomination of the members of the Executive Council. If any member does not approve of the committee's selection there is not the slightest objection to entering his personal choice in the space provided for that purpose on the ballot. Printed ballots have been distributed throughout the service. The principle of economy renders it inadvisable to mail ballots individually to each member. They have been distributed through regimental and post commanders, national guard instructors, unit instructors of organized reserves and similar agencies. It is urgently requested that members exercise their franchise in the selection of the members of the Executive Council and turn their ballots into the agency from which received; these ag-

cies will collect and forward them to the Secretary. In the event that a member should fail to receive one of the printed ballots it will be entirely satisfactory if he records his vote informally. If so desired the sample ballot printed below may be used.

The committee on nominations decided that Brigadier General J. J. Byrne, N.Y.N.G., should be placed in nomination to succeed himself. As a general proposition rotation in office is desirable for organizations of this nature, nevertheless the nominating committee felt that because of General Byrne's interest in the Association, his wide experience and the further fact that he is the Commanding General of the largest Coast Artillery organization, under one command, within the continental United States; his continuation in office is highly desirable.

Ballots should be mailed in time to reach the Secretary of the Association before January 5, 1935.

The United States Coast Artillery Association Ballot

FOR MEMBERS OF THE EXECUTIVE COUNCIL (1935-37)

- ☐ Brig. Gen. J. J. Byrne, N.Y.N.G.
 Vice Brig. Gen. J. J. Byrne, N.Y.N.G.
☐ Lt. Col. Harold F. Pride, 507th C.A. (AA)
 Vice Lt. Col. F. C. Tenney, 955th C.A. (AA)
☐ Lt. Col. Sanderford Jarman, C.A.C.
 Vice Lt. Col. E. B. Gray, C.A.C.

Fill in names of candidates of your own selection if so desired.

☐ _____
☐ _____

Signature

Rank and Organization

Address

INSTRUCTIONS

1. Record your vote by making an "X" in the appropriate square or indicate your choice by writing in the name of your candidate. Ballots received with signatures, but no individual votes recorded will be considered proxies.

2. Ballots received after January 5, 1935, will not be counted.

3. If residing on a military post, please hand your ballot to the Adjutant to be forwarded together with all other ballots collected on the post. Members of the National Guard should turn in their ballots to the regimental headquarters to be forwarded at one time. Those members for whom the foregoing instructions are not applicable should mail their ballots to The Secretary, U. S. Coast Artillery Association, 1115 17th St. N.W., Washington, D. C.

Greetings

From the Chief of Coast Artillery

To the Coast Artillery Personnel

At this season of the year it is altogether fitting that I should take advantage of the opportunity to extend the customary greetings to the officers and enlisted men of the Coast Artillery Corps. In doing this I have in mind the commendable progress made during the past year in all activities, often under trying conditions. More especially am I pleased to note the fortitude, high morale and the high standards of training maintained notwithstanding many handicaps. Throughout the Corps there is evident a determination to carry on and to maintain high standards of performance. These manifestations of your loyalty to the cause of National Defense are a source of deep personal satisfaction to me as they should be to all Coast Artillerymen. I cannot commend too highly these qualities; they are the foundation upon which the national character is built, and I have every confidence that these qualities will carry us to greater achievements in years to come.

The work accomplished in the civilian components is worthy of special comment. The National Guard has reached a state of training and efficiency to which we can point with justifiable pride. Their accomplishments in target practice, armory inspections and field training during the past year have been of a high order. The amount of work expended on self-instruction by the Reserve component, as reflected in the number of credit hours earned by means of the extension school courses, has reached a new high-water mark. This speaks in a most convincing way for the interest manifested by busy men who must have devoted long hours of their otherwise leisure time to preparing themselves more thoroughly to assume the duties, obligations and responsibilities which devolve upon them as citizens. They constitute an important part of our system of National Defense. I cannot commend them too highly for their industry, professional zeal and interest in their avocation. With these facts in mind, I extend to all of the personnel of the Coast Artillery Corps my best wishes for a Merry Christmas and a Happy New Year.

WILLIAM F. HASE,
Major General,
Chief of Coast Artillery.

The Siege of Tsingtau

By CAPTAIN BERNARD SMITH, C.E.

EDITOR'S NOTE: The author of this article had unusual opportunities for gathering authentic information on the operations in connection with both the attack and the defense of Tsingtau. The "PLAN" is a reproduction of an original German battle map obtained from a German officer, a member of the garrison. Information concerning the Japanese operations was obtained from a Japanese officer. Much of the material is from original sources. The photographs were taken by the author while making a detail reconnaissance of the theater of operations. It is, therefore, reasonable to assume that the article is a fairly complete account of what actually transpired.

TSINGTAU is noteworthy for two reasons—first because it is an outstanding example of field fortification as it was understood prior to the World War, and one which (except for organization in depth) foreshadowed very accurately the system that was evolved during the war; second, because of the comparatively small damage to the works after 72 days of siege and the lapse of some fifteen years. In many places the stencil marking, in German script, giving assignments of emplacements to machine guns, and of certain dugouts as aid stations, is still legible.

Until 1891 Tsingtau had no history. At that time the Imperial Chinese Government decided that Kiautschou Bay was a vulnerable point on the Shantung Coast, and established a garrison of some 3,000 men there. In 1897 two German missionaries were killed in the interior of Shantung Province, and on November 14th of that year Admiral von Diederichs landed 600 men and took possession of the town. There was no bloodshed. In March, 1898, China signed a treaty leasing Tsingtau and a district of 214 square miles around it, together with the Bay of Kiautschou and the islands off the coast, to Germany. The term of the lease was 99 years; the purpose, "for the repairing and equipment of ships, for the storing of materials and supplies for the same, and for all other furnishings belonging thereto." The treaty also authorized the construction of a railway, granted concessions for mining within a thirty li (nine mile) zone along the railway, and provided for the establishment of fortifications for the protection of the harbor.

In March, 1904, the harbor was completed. On the circular mole surrounding it were workshops accommodating 2,000 men. All ship repairs were possible and small steamers could be built. There was also a 16,000 ton floating dry dock. On June 1st of the same year the 395 kilometer railway—Tsingtau to Tsinan fu, capital of Shantung—was opened to traffic.

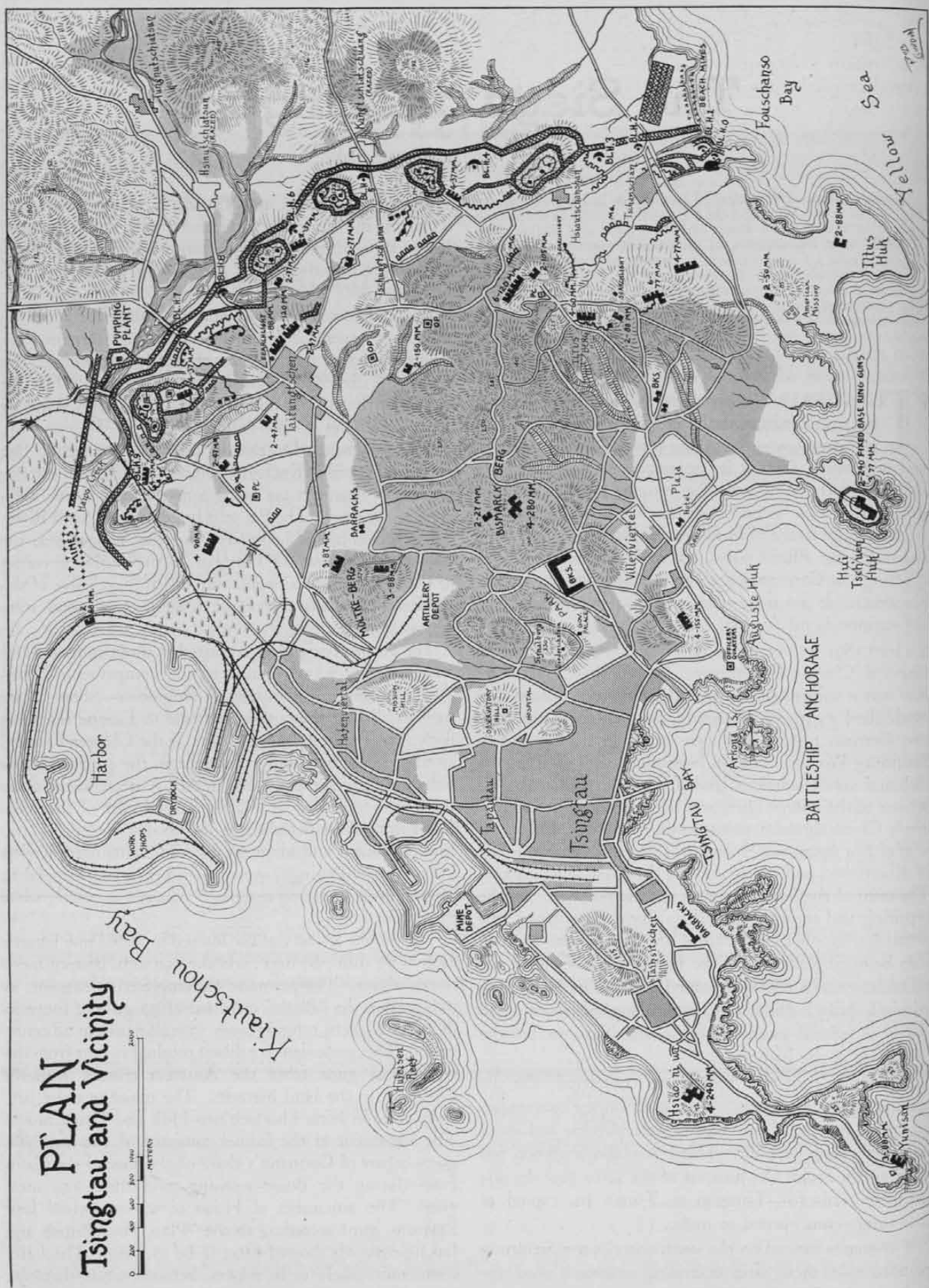
Tsingtau is located on the south shore of the Shantung peninsula—a rocky arm extending eastward from the

general line of the China Coast. It is 410 miles from Tientsin, and 440 miles from Shanghai. The city proper lies at the end of a peninsula forming the northern arm enclosing Kiautschou Bay. The Hai hsi peninsula, with Cape Jaeschke at its tip, forms the southern arm. The entrance between, only two and one-half miles wide, has a depth of over one hundred feet. In ancient times the Kiautschou Bay had an area of 255 square miles. The town of Kiautschou, whose walls were once laved by the waters of the Bay, is now separated from high water by some nine miles of sand and silt.

The Kiautschou District lies between Kiautschou Bay on the west and Lau schan Bay on the east. The easterly boundary, however, ran along a divide four or five miles west of the coast. The Pai scha ho, or White Sand River, forms the northern boundary, and the Yellow Sea, the southern. The town of Tsingtau, in the southwest corner of the District, had a population, in 1914, exclusive of the garrison, of about 65,000 of whom some 2,000 were Europeans.

The garrison originally consisted of seven companies of Marine Infantry (250 men each) four companies of Naval Artillery, and one company of Engineers—about 2,500 men in all. At the outbreak of war in Europe reservists flocked to Tsingtau from all parts of the Chinese Empire, so that, at the beginning of the siege, the garrison numbered 183 officers and 4,881 men. A detachment from the Legation Guard at Peking formed part of the reinforcement. This detachment included a battery of 150 mm. howitzers and some cavalry. The guns were loaded in box cars at Peking, covered with brick, and shipped to Shantung as "building material," which was exactly what they were not.

The mobile artillery of the fortress included one battery each of 77 mm., 88 mm., and the 150 mm. battery mentioned above. The permanently emplaced armament, as indicated in the "Plan," consisted of 97 guns of fourteen different calibers, ranging from 37 millimeter to 28 centimeter. This profusion of calibers resulted in part from the transfer of guns from the Austrian cruiser, *Kaiserin Elizabeth* to the land batteries. The major seacoast batteries were in Forts Hui tsch'uen Huk and Hsiao ni wa. The armament of the former consisted of two 240 mm guns, a part of Germany's share of the loot of the Taku Forts during the Boxer uprising, and three 150 mm. guns. The armament of Hsiao ni wa comprised four 240 mm. guns according to the "Plan," but British and Japanese records showed them to be 210 mm. The latter seems more likely to be correct, because, while there are



other 210 batteries in the fortress, there are no other 240 mm., and those in Hui tsch'uen Huk Fort are referred to specifically as loot of the Taku Forts.

Of these two batteries, Hui tsch'uen Huk stood off the Anglo-Japanese fleet single handed. The fleet very circumspectly fired from positions behind Prinz Heinrich Berg, where it was securely defiladed from the fire of Bismarck Berg, and out of range of Hsiao ni wa. The guns of this latter fort were blown up by their gunners without having been able to bring a gun to bear on the Allied fleet, though they did excellent work firing inland, in support of the land front.

Another, and a very important feature of the seaward defense was the mines. A plan, found among the papers when the fortress surrendered, showed locations of 296 mines, but many more must have been planted, because the Allied mine sweeping operations were continuous and attended by considerable losses, from the beginning of the blockade to the capitulation. The mine fields extended from Lau schan Bay on the east, all along the coast to Ta wan kou, west of the Hai hsi Peninsula, a distance of some ninety thousand yards. It was not until November 4th, only three days before the surrender, that firing positions for the fleet had been completely cleared south of Hai hsi.

The major land batteries were on Bismarck Berg and Iltis Berg. The heaviest guns of the fortress, four 28 cm. howitzers, were on the former with a battery of 210 mm. guns, and six 120 mm. and two 105 mm. guns were on the latter. Of the 97 guns and howitzers, 69 were 77 mm. or larger and of these, 31 were larger than 105 mm. British reports show a 150 mm. seacoast battery on Auguste Huk, just east of Arkona (Tsingtau) Island; the "Plan" shows no battery there and the site shows no evidence that there ever was a battery there. The discrepancy is probably explained by the mobile battery of 150 mm. which was emplaced as needed. The Japanese show a landward battery of 150 mm. howitzers south of Bismarck Berg, where the "Plan" shows none—probably another position of the ubiquitous 150's.

The extent of the landward front, from the right flank on the Yellow Sea to the left flank on Kiautschou Bay, is about 7,000 yards. The main line of resistance (see the Plan) consisted of five redoubts, with trenches and dug-outs of reinforced concrete. They were built during the period 1909 to 1913. The intervals between the redoubts, as well as the flanks, were protected by blockhouses, of which there were ten; four between the sea and redoubt 1; one each in the next three intervals; two between redoubts 4 and 5 and one between redoubt 5 and the Bay.

The pumping plant for the town water supply was located on the north bank of the Hai po Creek, which generally covered the left of the position. It was fortified as a strong-point, and was enclosed by the main line of the entanglement. Blockhouses were garrisoned by a sergeant-major and ten men. The redoubts were garrisoned by 200 men, except 1 and 5 which had 250 men

each. The garrison of the pumping plant was about 40 men and one officer.

From the valley and creek bed along the front of the position a gradual upward slope had been cleared of all obstacles and formed a glacis which was difficult to recognize as such. Advantage was taken of minor irregularities in the slope to place low wire entanglements, and in some cases broken glass. The inner slope of this glacis was faced with dry masonry and painted white. This wall had a batter of about one in six, and a height of from ten to twenty feet. At intervals of about 250 yards were lookout Martello towers, of which about one foot was visible over the crest of the glacis. Many of these were difficult to locate from the attacking side, but they had the disadvantage of being dangerous to occupy while the redoubt garrisons were firing. They were ultimately abandoned in favor of listening posts at the near edge of the main entanglement.

At the foot of the wall was a high wire entanglement ten meters in width. The pickets were of angle iron, pointed, and set in concrete. The wire was extremely heavy; some of it is still in place at Hui tsch'uen Huk, and after fifteen years exposure to sea air is in excellent condition. From the edge of the main entanglement a second upward slope formed the glacis for the entanglement which enclosed each of the redoubts. The arrangement was very much the same as that already described, except that the inner slope of the glacis was only four to six feet in height and there was no provision for lookout towers.

The continued upward slope formed the third glacis, at the crest of which was the parapet of a reinforced concrete fire trench, traversed every ten yards and with a back wall of reinforced concrete. There was no permanent overhead cover, but this was provided by sandbag loop holes or movable box loop holes. The fire from these trenches swept all three glacis and the wire entanglements, except in the case of redoubt 3, from which the main entanglement was not visible, and had to be covered from the adjoining redoubts.

The first glacis and wall were continuous right across the peninsula, being extended on the seaward flank by mines, and on the bayward flank by mines and a low entanglement that was carried out to a depth of four feet at low water. The redoubts were connected with each other by trenches with a field of fire sweeping the ground between them. The flanks and angles of the redoubts and connecting trenches were provided with emplacements for 30 mm. one-pounder guns and machine guns, thus enabling the redoubts to mutually support one another. Each of the redoubts was provided with several small searchlights for illuminating the foreground at night, in addition to those permanently emplaced on the hills to the rear and indicated on the "Plan." The searchlights were generally emplaced in the splinter-proof shelters of the fire trenches, and the light was directed by means of mirrors above the parapet wall. The mirrors were frequently shot away, but were as easily replaced. Communication trenches

from the angles of the fire trenches led down to the dug-outs or casemates in the rear. Each of the redoubts was approached from the rear by a good metalled road and communication trenches led back to the gun positions and the cover of woods and other features. The redoubts were located on hills thirty to sixty meters above sea level.

The blockhouses and connecting fire and communication trenches were constructed between August 1st and 18th. The artillery positions, except turret guns, heavy howitzers, and 210 mm guns were prepared after the declaration of war. For purposes of defense the front was divided into three sectors; first, from the Yellow Sea to include redoubt 1, second, redoubts, 2, 3, and 4, third, redoubt 5 to the Bay.

The Tsingtau peninsula, between Lau schan and Kiautschou Bays, is a rocky headland of granite and porphyry, but to the north of the Pai scha ho the terrain flattens out into a fairly level plain, extending northward to Lungkow on the Gulf of Chihli, about eighty miles west of Chefoo. The walled city of Tsimo, about 40,000 inhabitants, and whose railway station is Tsch-eng yang, lies at the edge of the general map, to the northward. Numerous hills rise abruptly from the plain to the north of the river, furnishing excellent outpost positions.

For a time after war broke out in Europe it appeared that Japan might remain neutral, but on August 15th she presented an ultimatum to Germany demanding the surrender of Tsingtau, the removal of all German naval vessels from Chinese and Japanese waters, and the evacuation of the Kiautschou District by September 15th. On August 18th the Governor of Tsingtau, Meyer-Waldeck of the German Navy, who had ordered the mobilization of the garrison on August 1st, telegraphed the Kaiser that the fortress would be held to the last. The departure of women and children and all non-combatants was ordered. On August 22nd all Japanese quitted the District and on August 23rd Germany replied to the ultimatum by recalling her ambassador. Japan declared war on the same day, but, as a British commentator remarks, "A large number of transports under convoy of a squadron were already en route to Shantung." They must have loitered on the way because the distance from Nagasaki to Lungkow is only 500 miles and the landing at the latter port was not made until September 2nd.

On the 24th of August notice of the blockade of Tsingtau was published. The following day Austria declared war on Japan, and the Austrian cruiser *Kaiserin Elizabeth*, which was then in port, became available to aid in the defense of the fortress. Meanwhile, the garrison had been active, and work to convert the North German Lloyd line *Prinz Eitel Friedrich* into a commerce raider was begun at the outbreak of the war, armament being transferred from two gunboats that were in the harbor. A cavalry screen was established extending from the railroad northwest of the town of Kiautschou, eastward to the coast line. Infantry detachments occupied the town and were disposed along a line extending generally eastward to Wang ko tschuang Bay. Detachments were also

placed at practicable landing places on the south and east coasts.

Practically the entire district forward of the permanently fortified line was constituted an outpost zone, with a line of observation generally along the district boundary and two lines of entrenched positions in rear. The first line extended from Kiautschou Bay generally along the heights south of the Pai scha ho to the Tschai ko Pass, about three kilometers from Lau schan harbor on the Yellow Sea, and the second line was established on the heights south of the Li t'sun Fluss, extending from the Ku schan, 3,000 yards southwest of the mouth of the Li t'sun through the Waldersee hohe and with the right flank on the Prinz Heinrich berg. This was called the Waldersee hohe Line. Two Chinese villages which were immediately in the field of fire of the permanent line were razed, and land mines were placed along the front. In many instances these mines were fired by Chinese farmers who continued to work their little holdings until they were actually brought under rifle fire. The railway bridge across the Pei scha ho was prepared for demolition.

On August 27th the Second Squadron of the Japanese Fleet arrived before Tsingtau, marines were landed on Tschu tschia tau and Tai kung tau, islands off the entrance to Kiautschou Bay, and mine sweeping operations were begun. The purpose of the Japanese was to limit the vessels risked in the attack on Tsingtau to the minimum required to do the job. At the same time, the safety of their convoys and their landing places had to be assured. Admiral von Spee's squadron, which later came to grief in the Falkland Islands, was still very much at large. The First and Second Squadrons, therefore, alternated on convoy and blockade duty. The combined strength of the fleet included two dreadnoughts, thirteen pre-dreadnoughts, two battle cruisers, thirteen armored cruisers, two destroyers, twenty seven torpedo boats, and fifteen submarines. The vessels used in the blockade and bombardment of Tsingtau were the following:

Battleships	Major Armament	Secondary Armament
Suwo	four, 10 inch	ten, 6 inch
Iwami	four, 12 inch	six, 8 inch
Tango	four, 12 inch	twelve, 6 inch
Okinoshima	three, 10 inch	four, 4.7 inch
Mushima	four, 9 inch	four, 4.7 inch
Triumph (British)	four, 10 inch	fourteen, 7.5 inch

Armored Cruisers, Iwate, Tokiwa, Yakuno.

Light Cruisers; Chitose, Akashi, Akitoushima, Ghiveda, Taka-chiho.

Flotilla Cruisers; Tone, Megami, Yedo.

Gunboats; Seven, including five formerly Russian.

Destroyers; Sixteen, including the *Usk* (British).

In addition there was a destroyer depot ship; a repair ship; a sea-plane mother-ship; a hospital ship (British); a surveying ship; and converted steamers and other craft for mine sweeping.

Though Tsingtau was the base of the German Asiatic Fleet, there were present in the harbor at the outbreak of war with Japan only small and obsolete vessels. Included were the following:

Cruiser *Kaiserin Elizabeth* (Austrian) built 1890, main battery, eight 6 inch guns.

Light Cruiser *Cormorant*.

Gunboats; *Tiger*, *Luchs*, *Iltis*, *Jaguar*.



Destroyer; Taku.
Torpedo boat; S-90.
River gunboats; Vaterland and Otter; also a Russian steamer.
The gunboats were generally armed with 4.1 inch or 15½ pounder guns.

On August 28th the Suwo, Tango, and Triumph bombarded the forts protecting the entrance to the Bay. Meanwhile, though the weather was very unfavorable, mine sweeping operations were in progress off the coast and the vicinity of Lau schan Bay, where a second landing place was to be established. On the 29th, the First Squadron arrived, relieving the Second of all duties other than those immediately connected with the object of the expedition. The weather continued bad, and while on patrol on the 31st, the Japanese destroyer *Shiratai* went aground in the fog on Lien tau, an island just east of Tschu tschia tau and almost due south of Hui tsch'uen Huk. Under cover of the guns of that fort the *Jaguar* steamed out of the harbor and delivered the coup de grâce.

The commander of the Second Squadron, which was then on convoy duty, reported that landing of troops from Army transports began at 6:00 A.M. on September 2nd at Lungkow. At the time of the leasing of Tsingtau a fifty mile neutral zone had been established within which it was agreed that neither China nor Germany would undertake any military activity. Operations against Tsingtau should properly have been kept within that zone, and when a landing was made at Lungkow, China at first protested, but the protest being unavailing, she extended the neutral zone to include Lungkow and the route of march of the Japanese army southward. She then massed troops along the boundary of this new zone, and, in typically Chinese fashion, prepared to defend her neutrality.

The strength of the Japanese Expeditionary Force, as reported by the veracious *London Times*, was 22,080 officers and men and 142 guns, which was presumably the number to be landed at Lungkow. The German accounts estimate the strength of the besiegers at 60,000. Landing operations were in progress at Lungkow from the 2nd to about the 13th of September. The Chinese magistrate of that town reported 20,000 troops landed between the 2nd and the 9th. Parts of units originally routed to Lungkow were subsequently put ashore at Lau schan Bay, where a total of 10,000 troops were reported to have been landed. There were about 1,400 British and Indian troops, so that the total number may be taken as between 30,000 and 40,000. No guns, or only a few light ones, were landed at Lungkow. The Japanese force, under command of

Wire entanglements between redoubts 3 and 4.

Wire entanglement between redoubt 1 and the Yellow Sea.

15 cm. battery at Hui tsch'uen Huk.

View toward redoubt 3 from redoubt 4. Wherever possible local Chinese conducted "mining" operations to recover the steel reinforcing.

Hui tsch'uen Huk from the west.

Lieutenant General Kamio, included the following units:

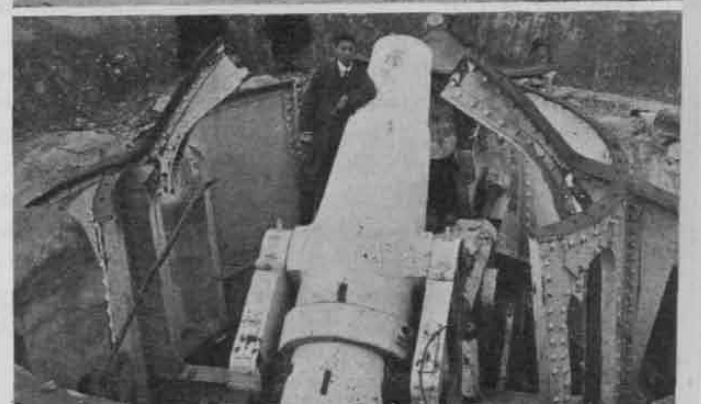
- 18th Division (23rd and 24th Brigades)
- 29th Brigade
- Siege Artillery Corps
- Detachments of Engineers
- Detachments of Army Service Corps, 6th and 12th Divisions
- Two Railway Battalions
- 8th Infantry Regiment (Railway Guards)
- Marine Artillery Detachment
- Detachment of the Flying Corps.

The British Expedition, under command of Brigadier General Bernardiston, consisted of 9 staff officers, 910 officers and men of the 2nd Battalion, South Wales Borderers, and 450 noncommissioned officers and men of the 36th Sikhs.

The Japanese choice of Lungkow as a landing place involved a southward march of about 165 miles. The country was fairly flat and no serious opposition was to be anticipated, but the weather interposed difficulties. Rain fell in torrents, and floods became a grave calamity with considerable loss of life and damage to property. The roads, very poor at best, were rendered almost impassible. Water was waist deep in the streets of Weihsien, an important town on the Tsingtau-Tsinan fu Railway about 80 miles northwest of Tsingtau and the same distance southwest of Lungkow. The Chinese offered no opposition to the passage of the troops, though they did object to the cutting of crops of koaliang or millet to "corduroy" the roads. Chinese coolies were employed as bearers and to keep the transport moving. The Japanese troops were as usual, excellently equipped and appeared to be in perfect condition. The staff possessed a complete knowledge of the country and a plentiful supply of maps. On September 13th Japanese cavalry raided the Kiautschou railway station and destroyed the telegraph line. At this time the main body of the infantry was about 40 kilometers from the town. On the 14th the cavalry entered Tsimo and on September 18th the first infantry contact took place at Wang ko tchuang, near the bay of that name, when the Japanese drove the Germans from an entrenched outpost position.

From the declaration of war until the railway was finally cut on September 17th, German reservists continued to pour into Tsingtau from all parts of China. On September 11th a party of thirty, mostly from Mongolia, passed through Weihsien en route to Tsingtau by hand-car. On September 17th the Director of the Shantung Railway, en route to Tsingtau in a special train, was less fortunate, being captured by Japanese cavalry at Kiautschou, that town having been occupied on that date.

From August 27th the German cavalry had been active



Guns of the 28 cm. battery on Bismarck Berg blown up by their gunners. There is no evidence of hostile hits.

Destruction of battery on Bismarck Berg.

24 cm. gun at Hui tsh'uen Huk.

Observation station on Bismarck Berg.

28 cm. howitzer emplacement on Bismarck Berg.

along the railroad between Tsingtau and Weih sien, and to the eastward. There was skirmishing at Liu t'ing and Kou t'a pu, on the Pai scha ho September 15th and heavy fighting there on the 17th. In this latter engagement the Japanese suffered heavily and Baron Riedesel of the 3rd Uhlans and Second Secretary of the Peking Legation, was killed. On the 19th the German plane (there was only one) bombed a Japanese column on the march near Pingtu, south of Lungkow.

At the beginning of the war there were two airplanes and an observation balloon at Tsingtau. One of the planes belonged to the Army and the other to the Marines, but both were unlucky. Two days after the declaration of war on Russia, the Army plane crashed on landing, wrecking the plane and engine but without injury to the pilot. Shortly afterward, the Marine plane crashed. The plane suffered no serious injury, but the pilot did. This plane was repaired and the combination of an Army pilot and a Marine plane successfully defeated the jinx.

The balloon was used in directing fire on Japanese troops and batteries defiladed by the hills from ground observation. During a storm on October 6th the cable parted and the balloon sailed away to the northeast and was never heard of again. It had been fired on continuously by both sea and land forces but was never hit. The German plane was constantly used for reconnaissance and on artillery spotting after the balloon was lost. From his hangar on the Iltis Platz (see Plan) this one-man Air Force sallied forth to bomb repair ships and mine sweepers, on one occasion fighting a duel with a Japanese airplane.

Daily reconnaissance flights, weather permitting, were made by Japanese seaplanes. Working from a mothership, they continued to bring in valuable information throughout the siege. In addition they bombed the railway line and barracks, ships in the harbor, and German infantry positions during the attacks of the latter part of September. During this period, when the advance of the Japanese right was held up by the fire of German ships in Kiautschou Bay, the planes directed the fire of the Allied fleet across the peninsula and the German vessels were driven out of range of the advancing troops. During these flights they were continually fired at, mostly with shrapnel, but were never seriously damaged.

The seaplane mothership was fitted with derricks for hoisting the planes in and out, but this system was not satisfactory, and it was desired to establish a base for the seaplanes in Lau schan harbor. By September 28th the mine field at the harbor entrance had been cleared and a landing forced with the aid of the fleet. The base was established none too soon, because about this time the mothership struck a mine and was so badly damaged that she had to be beached, and after temporary repairs was returned to Japan. The Japanese Seaplane Corps had three Henry Farman 100 hp. seaplanes which thereafter operated from the base.

The battleship *Triumph*, built for the Chilean Navy, taken over by the British and finally sunk in the Gulf of

Saros, was engaged in gunnery practice off the British port of Weihaiwei when ordered to join up with the Japanese fleet without delay. She coaled all night September 10-11 and on the morning of the 11th left Weihaiwei with the destroyer *Usk*, to be the Anglo in the Anglo-Japanese fleet. She arrived at the rendezvous off Tschia lien tau, about 35 kilometers southwest of Lau schan Bay, early September 12th where she joined the Second Japanese Squadron, Vice Admiral Kato commanding. On the arrival of Admiral Tochinai, with the First Squadron, September 13th, the *Triumph* and *Usk* were ordered to act under his direct command. When the First Squadron was ordered to Korean waters September 29th, the British contingent resumed the status of a coöperating fleet, and during the remainder of the siege conformed to the movements of the Japanese fleet, being based on Weihaiwei, for coal and supplies. On his departure, Admiral Tochinai presented the commander of the *Triumph* with one of the German field guns captured in the attack on Lau schan harbor.

On September 15th the British Expeditionary Force left Tientsin by rail and the *Triumph* and *Usk* left the blockading fleet the same date to convoy them from Taku Bar to Lau schan Bay. On the 20th the convoy arrived at Weihaiwei to load 259 mules—probably an American contingent—and on the morning of the 23rd they were met by a Japanese destroyer off Lau schan Bay and piloted to the anchorage through a channel that had been swept clear of mines. The troops were landed the same day.

The dozen days from September 18th to 29th was the period of the closing of the vise. The garrison knew the terrain within the District with absolute thoroughness. Walking was the principal recreation, and all possible routes through the Lau schan and other mountains had been carefully marked by the "Mountain Association." The routes were distinguished by paint marks of different colors and color combinations, and at junctions and prominent points, directions were cut into the rock. The Japanese carefully removed all these markings—possibly as having some occult significance. It is not surprising, therefore, that 2,000 men or less should have been able to meet all attacks from some ten times their number on 80 kilometers of seacoast and land front (they very probably enjoyed it) and that fifteen days of hard fighting should have been required to drive them back within their permanent lines.

On September 15th a destroyer flotilla drove in the German patrols at Lau schan Bay and a covering detachment of light troops and cavalry were landed there. Detachments of the 18th Division, which had been sent around by sea from Lungkow, were landed on the 18th. On the same date units of the 18th Division, which had advanced overland, reached Tsimo. During this time Japanese cavalry was active, driving German patrols into the hills to the west. Infantry units advanced north and attacked a German entrenched position at Wang ko tschuang, 13 miles east of Tsimo. The Germans retreated

at sundown leaving supplies and equipment behind. On the 24th there was skirmishing at the Mecklenburg Haus, a German sanatorium ten kilometers northwest of Lau schan Bay in the Lau schan Mountains. On the same date the Germans attacked a Japanese column attempting to force the Kletter Pass, eight kilometers west of the Mecklenburg Haus.

Concentration of Japanese troops at Tsimo continued. Infantry units were in contact with the Germans on a line extending eastward through Luan tschia tai, on the north bank of the Yuen t'ou Fluss, five kilometers southeast of Liu t'ing. On the 26th the Japanese attacked the line Tau schan (one kilometer west of Luan tschia tai)—Tschai kou, driving in outposts in front of the first line of defense, extending generally eastward from Kiautschou Bay through Hei tschien, three kilometers south of Luan tschia tai. Fifty prisoners and four machine guns were captured in Tschai ko, on the south fork of the Pei scha ho, and covering the Marsch Pass to the headwaters of the Tschang tsan Fluss.

Assaults were then delivered on the line of resistance, the Germans first being driven from the saddle-back mountain Wo lang tschy, south of Hei tschien, and then the left wing, which was supported by the fire of German gunboats in Kiautschou Bay, rolled back. By nightfall, the Japanese right had entered Ts'ang k'ou, though the German right, in the Lau schan, still held. German accounts put the strength of the attacking force at 25,000 men, which seems considerable, on a fifteen kilometer front defended by 1,500 men.

The attack was continued on the 27th but was considerably hampered on the right by the fire of the German gunboats. No progress could be made until the Allied fleet, firing across the peninsula, drove the German craft out of range of the attacking troops. By night the Japanese had reached the line Li t'sun—Tschang t'san rivers; to Tschin tschia ling, northeast of Prinz Heinrich berg and thence northeast through Wu schan and the heights south of Lau schan. On the 28th the attack was renewed. The British arrived on the battlefield this date and attacked with the Japanese. The attack was supported by the fire of the fleet, using large caliber shrapnel, on the Ilitis berg Forts and contiguous works. Despite determined resistance the Waldersee hohe Line was pierced, and by the 29th, except for posts on Prinz Heinrich berg, the Germans had been driven within their permanent lines.

On the 28th a Japanese force was landed from 21 steamers in Wang ko tschuang Bay and advanced via the town of that name and the Hotung Pass. The advance through the Lau schan was delayed an hour by a detachment of 40 Germans who withdrew without loss. The march was continued southwestward to a junction with the main Japanese force. After protracted mine sweeping operations a landing was forced on the morning of the 28th, in Scha tsy k'ou Bay, an officer, 56 men and 4 Krupp guns with carriages and ammunition being captured.



Shangtung

Chinese reports put the Japanese losses during the battles of the 27th and 28th at 1,700 men. The Japanese estimated the strength of the force in their front on the 28th at 1,000 infantry, 10 guns, several machine guns, and three gunboats.

From observers' accounts, it appears that the Japanese made their landings in a very workmanlike manner. From the Lungkow landing place a light railway was carried via Tsimo to a junction with the Tsingtau-Tsinanfu Railway. The principal landing place in the vicinity of Tsingtau was at Lau schan Bay, just north of Cape Yatau on the east coast. Here the situation was ideal. A broad, flat shelving beach, with fair rise and fall of tide, and deep water close in, sheltered from the north and west, with plenty of inshore room for parking guns, storing ammunition and forage and laying sidings for the light railway, left very little to be desired. A very fair road (for China) led inland to the mountain passes. The first pier built was a floating one, which served its purpose admirably until it was destroyed by heavy seas during the storms of October 16-17. Two pile piers were then constructed for the landing of heavy howitzers. Flat-bottom sampans were mostly used for landing, each carrying 15 to 20 men or six horses, the latter being walked ashore when the sampans grounded. Large iron lighters were used for landing gun carriages, ammunition and light railway material, the lighters being beached at

high tide and unloaded at low water. On completion of the pile piers, these same lighters were used to unload the heavy guns. A special vessel, fitted with a powerful crane, lifted them from the transports to the lighters, and a wooden gantry erected at the end of one of the piers lifted them to the light railway cars, sidings having been laid up to the pier head. Vast numbers of Chinese coolies were employed on all kinds of work carrying stores and laying the railway. The Japanese themselves did the water work and the actual landing.

The beach generally presented a most inspiring scene, British and Japanese flags crossed before the Commandant's office; wireless station in operation; long trains of ammunition and stores moving off on a continuous line with an occasional howitzer battery interposed; railhead being pushed rapidly along, men, horses and supplies being landed continually.

When the landing at Lau schan Bay was well under way, mine sweeping operations were intensified in the vicinity of Lau schan Harbor, on the south coast about 12 kilometers west of Lau schan Bay. It was desired to clear an approach to this harbor as soon as possible to allow an attack in force to be made on it from the sea. It afforded an excellent seaplane base in addition to its many advantages as an advanced base for forwarding supplies to the Army, on account of its close proximity to the firing line. Besides being closer than Lau schan Bay, it was served by an excellent metalled road. While this landing place is referred to as Lau schan Harbor, it is obvious from the General Map that Scha tsy k'ou Bay immediately adjoining it, is meant—the former being shoal almost to its mouth while the latter affords an excellent landing place.

As has been noted, the attack, supported by cruisers and destroyers, was made on the 28th, being synchronized with the general attack on the German positions of the Waldersee hohe Line. The landing was made with but little opposition.

Mines were the constant preoccupation of the fleet, though only minor craft were lost through that agency. There was no occasion to take place a dreadnought in the danger zone of the hostile mine fields, since the older battleships available had sufficient primary armament to make them several times superior to the coast guns both in range and volume of fire. Mine sweeping was necessary to clear entrances to harbors and to prepare firing positions for the fleet. Sweeping began with the arrival of the fleet, but as late as September 23rd, mine fields still existed off Lau schan Bay, which argues phenomenal activity on the part of the garrison. Torpedo boat Number 33 was sunk while mine sweeping on November 11th, four days after the capitulation. While landing operations were in progress at Lungkow, and in spite of very bad weather, the fleet was engaged in sweeping operations to clear the coast where the second landing was to be made. By the time the landing at Lau schan Bay was begun, sweeping operations had cleared the foreshore so that the fleet could close in and cooperate with the land forces attacking the Ger-

man right flank. On the 22nd a Japanese torpedo boat, while on patrol, was sunk by a German cruiser.

On the 27th, all battleships and certain cruisers were assembled in Lau schan Bay as a prelude to the attack on the following day in cooperation with the Army. Cruisers *Tokiwa* and *Yakuno* with destroyers were assigned to cover the landing of a naval force in Scha tsy k'ou Bay while the *Suwo*, *Iwami*, *Tango* and *Triumph* were assigned to the attack of Iltis Fort and the adjoining works.

On the 28th the *Suwo* led the battleship division up to the firing point south of Tschu tschia tau, and at 8:45 A.M. opened fire at 14,000 yards. As will be seen from the general map, this range was about 1,500 yards short, haze and mist making both gun laying and observation of fire very difficult. The battleships, steaming at 12 knots and five cable lengths apart, opened fire successively as they reached that range. The *Chitose* had been stationed off Tai kung tau for spotting, but during this run did not prove of much assistance. The German forts did not reply. As the squadron turned away to take position for another run, Iltis Fort opened fire on the advancing troops, which allowed it to be accurately spotted for the second run. By 9:35 A.M., when the second run commenced, the light had improved considerably, and shortly after the *Suwo* opened fire, she was fired on by the guns of Fort Hui tsch'uen Huk which continued to fire on each vessel successively as it made the turn. There were no hits on the fleet and the effect of the fire on the forts could not be determined, though an "assist" was allowed, since the infantry reached their objectives. During this bombardment 148 rounds were fired: 33-12"; 71-10"; 9-8"; 34-7.5"; and 1-6".

Between October 1st and 12th naval activity was not very marked. During this period three mine sweepers were blown up. On the 6th, the *Suwo* and *Triumph* attempted bombardment from the positions used on the 28th, but mines were found in the vicinity which kept the vessels at a range from which fire was ineffective. Orders were given to resume the bombardment on the 13th, the plan being for the *Suwo*, whose guns could be elevated 24 degrees, to concentrate on Hui tsch'uen Huk and neutralize it while keeping out of range, and the *Triumph* and *Tango* to close in and alternately fire on Iltis berg. However, the Japanese Emperor directed that hostilities be suspended on the 13th to allow non-combatants to evacuate the city, and the bombardment was accordingly postponed.

At 9:00 A.M. on the 14th the *Suwo* was listed three degrees and opened fire from a position north of Tai kung tau at a range of 17,000 yards. The Fort replied but the shells fell short. Spotting was done for the *Suwo* by a seaplane, which also dropped some bombs on the Fort. The *Tango* closed in to bombard Iltis berg, and at 9:40 A.M. Hui tsch'uen Huk, undisturbed by the fire of the *Suwo*, suddenly shifted to the *Tango* and drove her out of range. The *Triumph*, whose guns could be elevated only 13 degrees, very gallantly steamed into the barrage

in her turn and at 10:30 A.M. was struck by a heavy shell just under the crosstrees of the foremast (the usual coast artillery aiming point). The mast was wrecked and splinters passing through the roof of the main control killed one able seaman, seriously wounded an officer and a marine. The range from the fort was 14,570 yards.

When the *Prinz Eitel Freidrich* sailed from Tsingtau on its career as a commerce raider, there remained in the harbor only the lame ducks of the German Asiatic fleet. But what they lacked in speed, they made up in activity. Mine planting operations were continuous and were a constant menace to the Japanese fleet. In addition they functioned as mobile batteries, holding up the Japanese advance as has already been noted and shelling patrols and supply columns, as well as the right of the Japanese line. This activity was not without risk, however, the destroyer *Taku* being sunk September 30th and the *Jaguar* hit several times on October 3rd. To deal with this situation, a Japanese Naval Brigade of 500 men with four 6 inch and four 4.7 inch guns were established on Ku schan, until September 28th the left bastion of the Waldersee hohe Line. The batteries were ready to fire on October 4th and on that date, when it came out for the daily strafe, the German fleet was very roughly handled, the *Kaiserin Elizabeth* being hit three times and driven out of range. On the 8th, the *Tiger* and *Luchs* with a Russian steamer, were sunk in the Bay, probably as a result of the activities of this battery. On the 14th the harbor was brought under fire, which marked the beginning of the end for the German fleet.

On the 17th the *S-90*, which was the fastest vessel in the harbor as well as the only torpedo boat, ran the blockade. She cruised under cover of darkness for some hours without meeting any hostile craft. At about 1:30 A.M. a cruiser with one funnel—the *Takachiho*—could be made out. The *S-90* approached to 500 yards unperceived and fired two torpedoes, and at 300 yards fired a third. The third torpedo found its mark; the Japanese cruiser, loaded with mines, literally exploded. It sank at once, and only by good fortune did the *S-90* escape the fragments that rained on the sea. Only three of the *Takachiho's* complement of some 270 were saved. But the terrific explosion had the same effect on the *S-90* as a depth bomb on a submarine; it started her plates, and leaking badly she was beached about 60 miles south of Tsingtau and blown up with her last torpedo. The crew were subsequently interned at Nanking. Until the 20th, when the wreck was found, the Japanese fleet scoured the sea to avenge their loss. Being denied that satisfaction the Japanese colors were raised over the wreck, but on the protest of the Chinese they were removed. This action was the swan song of the German fleet. On the 1st of November when the fortress was summoned to surrender the *Triumph* and *Suwo* patrolled the entrance to the Bay to forestall a dash for liberty by the *Kaiserin Elizabeth*, but badly damaged by shell fire during the bombardment of October 31st and November 1st, she was sunk in the

Bay at night. On November 4th the remaining vessels were also sunk.

The Tsingtau-Tsinanfu, Kiau-tsi, or Shantung Railway as it was variously called, was included by the Japanese in their plans from the outset. The troops landed at Lungkow included two railway operating battalions and a regiment of railway guards. The railway was well worth considering. In 1912 it had carried 1,250,000 passengers and about 850,000 tons of freight. It was paying dividends at the rate of 7½ per cent on a capitalization of 54,000,000 marks. The Japanese built a light railway connection with it from Lungkow, and by October 6th had occupied the entire line from Li t'sun ho to Tsinanfu. The Chinese protested to the British, but the Japanese contention that the railway was essentially a German enterprise prevailed. The towns of Weih sien and Tsinanfu were occupied and detachments of about 30 men were placed at each of the other 48 stations. The railway operating battalions had their tickets already printed when they arrived, but the Germans had removed essential parts of the locomotives, so that, notwithstanding their foresight, the line could not be opened until the parts were replaced.

It will be remembered that by September 29th, except for small detachments holding Prinz Heinrich berg, the Germans had been driven within their permanent lines, though at the expense of heavy losses to the Japanese. This date marked the beginning of the systematic siege of Tsingtau. The Fortress was effectually blockaded by sea and completely invested by land. In addition to the seaplane base, an army depot, principally for the supply of fuel, provisions, and supplies other than ammunition was established at Scha tsy k'ou Bay. Light railways connected this depot, as well as Lau schan Bay with supply installations in rear of the lines of investment. Siege gun emplacements were under construction.

On October 2nd Japanese marines attempting to gain ground on the German left were surprised by a counter attack and driven from their original positions. The intervention of the Japanese reserves was required to restore the situation. On the night of October 4-5 a force of 350 Germans made a sortie from the left against Schuang schan. The attack was repulsed with a loss of 47 killed and six captured. On October 6th telegrams were exchanged as to the names of prisoners. Except for a certain partiality complained of by the British and noted below, this was a gentleman's war. On one occasion a Japanese officer walked out on the glacié and challenged any German to a duel with swords. A German officer accepted, and having been brought up on that sort of thing, made short work of the challenger.

Between the 8th and the 15th, German artillery fire was reported as slackening. The Japanese were engaged in completing gun emplacements and bringing up ammunition. On the night of October 15-16 the principal German post on Prinz Heinrich berg—called the Adler nest and garrisoned by 50 men—was carried in a surprise

attack. A typhoon intervened and caused practical cessation of hostilities. Rain fell in torrents, washing men out of their bivouacs, causing collapse of cut and cover shelters.

The storm did great damage to the landing facilities in Lau schan Bay, washing away the Pontoon Pier, wrecking 50 sampans, and drowning 25 Japanese soldiers. The pile piers stood the buffeting without suffering at all. At this time practically everything of importance had been landed, but the heavy rains rendered the roads impassible, and washed away large sections of the railway, hindering the transport of heavy howitzers and ammunition, and involving a delay of about ten days in emplacing the siege guns. On October 22nd a half battalion of the 36th Sikhs arrived from Tientsin as reinforcement for the British contingent. When the storm abated, work on the emplacements for the 28 centimeter howitzers was pushed with redoubled vigor, ammunition was brought up, trenches repaired and saps pushed forward by night.

On October 27th the Japanese completed the installation of a signalling and observation station on a spur of Prinz Heinrich berg, about 6,400 yards from Iltis berg and at an elevation of about 900 feet. This station was used by both Army and Navy for directing fire. It was in telephone communication with the various batteries and with a wireless station which signalled the results of the firing to the ships. The station consisted of a strong bombproof shelter, well concealed and affording an excellent view of the German position.

On the 29th the bombardment by land and sea was increased in intensity and during the night of the 30th the Allies advanced their trenches to the line Sy fang-Schuang schan-Tung wu tschia-Hsiau yau-Hsin tschia tsch, generally about 1,300 yards from the first entanglement. During the 30th the bombardment was redoubled in violence preparatory to the grand attack by 6,000 Japanese infantry, to take place at 6:00 A.M. on October 31st, the Emperor's birthday. The Army siege guns opened fire at daylight.

But the Germans had planned a celebration also. The forts appeared to have been reduced to silence when suddenly, before the assault could be launched, they opened fire with maximum intensity on the siege batteries and troops. It was a complete surprise to the Allies, and the carefully prepared attack, which had been intended to celebrate victoriously the Emperor's birthday, had to be abandoned. During the preparatory bombardment, the Germans had protected their guns with earth and sandbags, and had withheld their fire preparatory to coming into action with full power at the decisive moment. The surprisers being themselves surprised, the attack was postponed and the bombardment resumed with all the fury of disappointment. At the end of the day the Germans had less than 30 rounds of ammunition per gun remaining. In the course of the bombardment the Standard Oil tanks were fired, and a conflagration started on the wharf which burned for four days. Forts Hsiau tschan schan (Redoubt 1) and Iltis berg were the principal targets,

though many shells fell in the town. Fire of the siege batteries was directed from the O. P. on Prinz Heinrich berg.

As a feature of the celebration, ten heavy shells were dropped within 20 yards of General Bernardiston's mess and headquarters, which had been spotted by the German aviator. A British observer on the *Triumph* remarked; "I think the Germans hate us more than the Japanese, for they always fire their twelve inch at us." By October 31st, ice had begun to form in the trenches, which added nothing to the comfort of the besiegers.

After the alarm of October 16th, naval activity was not very marked for a period. Mine sweeping and the blockading patrol continued. On the 20th, Hospital Ship Number 7 (British) arrived and was placed at the disposal of the commander in chief. With the establishment of the observation station on Prinz Heinrich berg the situation changed. Fire control, which had previously depended on seaplane observation, and spotting by ships posted on the flank of the line of fire, now became very effective. In addition to this aid to fire control by the fleet, special squared charts showing the German defenses were issued and general outline sketches indicating the principal batteries and other sensitive points. This method of control proved simple and effective. On the 26th the *Suwo* carried on the bombardment; on the 27th the *Tango* and *Okinoshima* bombarded Iltis berg, firing 20 rounds each. On the 28th, the *Tango* and *Okinoshima* bombarded during the afternoon; of 20 rounds fired, the *Tango* scored five hits on Battery III (see Plan), near redoubt 1. Bombardment by the fleet was increased on the 29th. Battleships were listed 5 degrees to keep them out of range of Hui tsch'uen Huk, the only fort which could get at them in the line of approach adopted—that is, generally north of Tai kung tau and partly defiladed by Prinz Heinrich berg.

This safety was purchased at a price, however, as the only positions that could be reached by the guns of the fleet were Hui tsch'uen Huk, which was immune, and the works on or near Iltis berg. In this connection, a Coast Artilleryman's analysis of the reasons for placing some of the heaviest guns in the fortress on Bismarck berg and in Fort Hsiau ni wa, neither of which apparently fired a shot at the hostile fleet, would be very interesting. On this date the *Suwo*, *Okinoshima*, *Tango* and *Triumph*, bombarded Iltis berg, 80 Meter Hill, south of it (Battery I) and a small fort below it (Battery II). Between 9:30 A.M. and 4:30 P.M. a total of 197 rounds were fired—58,—12 inch; 132,—10 inch and 7,—7.5 inch. On October 30th the bombardment of the preceding day was renewed, the *Iwami* replacing the *Tango*. The guns of Hui tsch'uen Huk replied occasionally, but all shots fell short. The extreme range of the fort was ascertained to be about 15,700 yards. Two hundred and forty-one rounds were fired, principally on Fort Hsiau tschan schan, Redoubt 1 and Tschan schan. The *London Times* adds, naively—"Most of the forts were silenced during the day."

In addition to the easterly line of approach, the Dockyard, and Fort Hsiau ni wa could be reached from behind the Hai hsi peninsula, but at this time the area had not yet been swept clear of mines. On October 31st the *Suwo*, *Iwami*, *Tango*, *Okinoshima* and *Triumph*, bombarded from 9:00 A.M. to 4:30 P.M., mostly at Hui tsch'uen Huk, and Auguste Huk, west of Auguste Victoria Bucht. The fire was returned but without effect. On November 1st the general bombardment continued. Admiral Kato summoned Governor Meyer-Waldeck, in the name of humanity, to surrender, but no reply was received. The *Suwo*, *Iwami* and *Triumph* fired 110 rounds during the day. On November 2nd it was too misty to fire from the sea. By November 3rd the besieging troops had approached so close to the defenses that it was no longer considered safe to fire at the low-lying works. Portions of the dockyards were burned and the large crane was destroyed. The floating dry dock careened and sank under shell fire.

During the 4th and 5th the bombardment was carried on by the *Tango*, *Okinoshima*, and *Mushima* from behind the Hai hsi peninsula, and on the night of the 5th, Fort Hsiau ni wa was blown up by its garrison. Bismarck berg was fired on by the *Triumph*. On the 6th the mirage was too bad for firing and by 7:00 A.M. on the 7th the fortress surrendered. The total rounds fired during the last five days of the bombardment were: 180,—12 inch; 408,—10 inch; 107,—8 inch; 120,—7.5 inch. One hundred and fifty hits were signalled on works being attacked, though not necessarily on guns. Five guns on Itis berg and one on the slope were demolished. On four other occasions, trenches were reported to be badly damaged.

During the night of October 31st the Army worked up to the first attack parallel and dug in. During November 1st only Bismarck berg and Hui tsch'uen Huk were regularly replying to the bombardment. Hsiau tschan schan Fort was in flames and a conflagration was raging in the harbor. A Japanese attack on Redoubts 4 and 5 was repulsed. During the night of November 1st the first attack parallel was occupied and communication trenches started forward to the second parallel. On November 2nd, the power station, south of the small harbor, was heavily bombarded and put out of service. During the night the Army dug the second attack parallel. On the right flank an attempt to carry the Pumping Plant by assault failed. On the left flank the trenches were advanced to within 1,000 meters of the line of redoubts. During November 3rd the power house was completely demolished. The Germans counterattacked in an effort to drive the Japanese from the vicinity of the Pumping Plant. On November 4th the bombardment was increased to the fullest extent, reducing all German batteries but Hui tsch'uen Huk to silence. The remaining oil tanks were fired and Redoubt 1 badly damaged. Barracks on Bismarck berg were in flames.

On the night of the 4th the Pumping Plant was carried by assault, an officer and 20 men being captured. An at-

tack on Redoubts 2 and 3 was repulsed. Sapping up the first glacis, toward the third attack parallel was continued. On the 5th, German batteries began to run out of ammunition. Saps were carried to the crest of the first glacis and the third attack parallel dug along that line on the night of the 5-6.

The third parallel was in effect the jump-off line, and the front was divided into four sectors for the final assault. Japanese occupied the westernmost sector, facing Redoubt 5; next came the British facing Tai tung twchen; next a Japanese sector facing Redoubts 4 and 3, and a third Japanese sector facing Redoubts 2 and 1. The mines in the bridges across the Hai po in front of the British position were removed by a British officer before the Germans could fire them.

During the afternoon of November 6th the German one-man Air Force loaded up the "secret papers" and took off after firing his hangar. He landed at Ichowfu, about 120 miles from Tsingtau and from there proceeded to Shanghai.

On the same date the besieging artillery got a direct hit on Hui tsch'uen Huk, thus spoiling that fort's spotless record. The destruction of the upper 240-mm. turret was claimed, though actually the plotting room and observation station were hit and completely destroyed. Beyond scoring the laittance, the fleet failed to score.

At about 9:00 P.M. preparatory attacks were launched against Redoubt 4 and later, against 3. In front of 4 the Japanese crossed the entanglement and surprised the German listening post, four of the five sentries being captured. Rifle fire being impracticable at night, the garrison had been provided with improvised grenades with 3 centimeter (not very long) fuses. Lit with a special match, the grenades were held for a count of three and then thrown; very few were returned.

The Japanese forced their way into the redoubt, but the attack was unsupported and they were pushed back. By 11:00 P.M. the redoubt had been cleared of hostile troops. The Japanese commander was wounded; he remained somewhere on the upper glacis, and sent out calls for support, but none arrived.

The attack on Redoubt 3 is described in much greater detail by a Japanese officer. The 56th Japanese Infantry, with the 2nd and 3rd battalions in the first line had gradually advanced until on the night of November 5th they occupied trenches within 10 meters of the crest of the first glacis. Early on the night of the 6th the Engineers cut two lanes about five meters wide through the wire in front of the 3rd Battalion.

At 7:00 P.M. Second Lieutenant Nakamura was directed to report to battalion headquarters. He at once assembled his squad leaders and gave the following order:

"Uniform light order. Leave off knapsacks, put one day's ration of toasted bread in the packs, carry canteens and haversacks, wear as clean underwear as possible, leave behind handbooks, diaries, etc., and all men will tie a white band around the left arm.

"Arms and equipment. Rifles, bayonet, entrenching tools and 210 rounds of ammunition.

"I will carry a white flag, and each man will carry a national flag, made during the time we have been facing the position."

Lieutenant Nakamura then proceeded to battalion headquarters where he received instructions and information at hand about the fort. A sergeant and 20 men from the Engineers, and three sergeants and three lance corporals especially selected from the 3rd Battalion were attached. He was furnished with 30 hand grenades and a field signal lantern. He was informed that the artillery would cease fire during the charge but would open up during the pursuit; that an infantry squad and two bomb guns would provide protection to the north and to the south, and that the battalion and regiment would be in position to advance at the proper time.

He returned to his platoon, gave instruction in the use of the grenades and the signal lantern and addressed the men as follows:

"It is very essential, but most difficult, for military men to find a fit place in which to die. That we have been selected from the entire enveloping army to charge and capture the central position is a great honor, and for military men, is a chance to die difficult to obtain a second time. Since our departure from Japan we, of course, have always had the resolution to do or die. It is considered a disgrace for military men to die of disease during a march or while besieged. Therefore we pay great attention to sanitation and avoid exposure to hostile eyes and guns because we want as many bayonets as possible on occasions such as this.

"Tonight I will offer my life to the Emperor. Life or death is ordered by Heaven and is beyond the power of man. To meet death composedly when it comes is the special characteristic of our country's warriors. This platoon must capture the central fort tonight, regardless of circumstances. Ground once captured must not be yielded even an inch. If I fall the squad leader takes my place; if he falls the lance corporal takes command; if he falls all must coöperate and fight furiously even to the last man. Rifles will not be loaded, because as soon as we see the enemy we must jump at him with the bayonet. As soon as we meet the hostile machine guns, the hand grenades will be thrown and we will charge just as they explode. The men who carry them will advance at the head of the platoon. Volunteers for this duty will report to me."

As one man the entire platoon stepped forward. Ten were selected and each one put three grenades in his outer pockets.

Upon instruction from the company commander, who was also present, the platoon faced in the direction of the Imperial Palace, presented arms with fixed bayonets, and marched off without uttering a sound.

At the position from which they were to charge, Lieutenant Nakamura assembled his noncommissioned of-

ficers and his two squads of Engineers and gave the following orders:

"I command an infantry platoon and two squads of Engineers, and I plan to charge the central fort at 1:00 A.M. tomorrow.

"An infantry patrol of five men with hand grenades, one squad of engineers and the 1st, 2nd and 3rd Infantry squads will form the right detachment and advance by the right road. An infantry patrol of five men with hand grenades, one squad of engineers and the 4th, 5th, and 6th infantry squads will form the left detachment and advance by the left road.

"The infantry will advance with the engineers leading and when the machine guns are met they will throw the grenades and charge.

"The engineers, as soon as the infantry occupies the fort, will dismantle all mechanical devices and turn them over to the infantry.

"The scouts will seek out and report the position of the enemy, their outer defenses and mechanical devices.

"The remaining infantry will cross the ditch by means of ladders, one to each squad. Upon reaching the parapet, the right detachment will form line to the left and the left detachment will form line to the right, without interval between the detachments.

"Lance Corporal Shima, as soon as the parapet is occupied by the platoon, will, facing to the rear, make a signal to the right, left, up, and down with the signal lantern. Then if the parapet is successfully held he will signal by waving the lantern in a circle. Before starting he will connect up the battery.

"I will be with the right detachment."

Each leader was required to repeat his orders, and all watches were set. Promptly at 1:00 A.M. the ladders were lowered, the ditch was crossed, and the detachment arrived under the enemy parapet, which fact Lance Corporal Shima immediately signalled to the rear. Both detachments were about to form line but everything was so quiet inside the fort that omitting to do so did not seem risky, and they proceeded in column formation toward the fort at right angles to the line of fire. They arrived at the gorge and occupied the shelter trenches there, stationed a patrol of one noncommissioned officer and ten men with hand grenades near the outside of the gorge to protect against counter attack and blocked all entrances to the enemy's bomb-proof shelter, which by this time they had discovered. Due to confusion among the detachments, men's voices calling to each other were heard by the enemy outside the central position and they poured a heavy rifle and machine gun fire into Redoubt 3.

During this time the Engineers had cut all telephone wires and had located and forced their way into the telephone station. The enemy inside resisted with pistols, but they were soon overcome. About this time the company commander came up with the two remaining platoons stationed one at the gorge and sent the other into the bomb-proof shelter. The confusion of the enemy in-

side, clothed as they jumped out of bed, was difficult to describe. They immediately surrendered. Later it was learned that the German sentry had at first thought the detachment only a small patrol, and learned his mistake too late. One hundred and thirty men were captured in Redoubt 3.

A pioneer company pushed through the breach thus opened and carried Iltis berg by assault. At about 3:00 A.M. these troops began firing into the rear of the line of redoubts.

At 5:00 A.M. the general assault was delivered. At 5:35 A.M. the batteries in the vicinity of Tschung tschia wa and Tai tung schen had been captured. The bomb-proof shelter of Redoubt 4 was blown up. Forts Bismarck and Moltke were successively carried but not until the howitzers of the latter had been blown up by propelling charges, the shells having all been fired.

At 6:15 A.M. the Governor telephoned to Redoubts 2 and 4 directing them to raise the white flag. Redoubt 1, as a result of the intensive bombardment to which it had been subjected, was out of telephone communication and did not receive word until 7:30 A.M., while 5 was not reached by messenger until 9:00 A.M. At 9:20 A.M. negotiations for capitulation were started and at 7:00 P.M., November 7th, the fortress was formally surrendered by Governor Meyer-Waldeck, with 2,496 officers and men.

Approximately 2,000 rounds of 7.5 inch or over were fired by the fleet. Of the number of rounds fired by the heavy siege guns, no record is at hand. As has been noted, most of the fire of the fleet was directed at Iltis berg and Hui tsch'uen Huk, the former being very badly mauled. At Hui tsch'uen Huk the upper of the two 240-mm. gun turrets was destroyed as was the observation and plotting room. A direct hit on the turret was claimed by the besiegers, but the present appearance of the emplacement leads me to believe that the hit was on the

plotting room and that the turret was blown up by the gun crew, as were the howitzers on Bismarck berg. The other 240-mm. gun and the three 150-mm. guns were not blown up. The former had a hole burned through the barrel just forward of the first band; the traversing mechanisms of the latter were wrecked.

The German infantry trenches, as well as emplacements, magazines and redoubts were generally constructed of reinforced concrete and relatively little damage was done to them. The infantry trenches suffered most and were, in places, fairly well smashed up, but nowhere beyond recognition or repair. The small infantry bomb-proofs along the fire trenches, sheltering about a squad of men, were good protection against 3-inch shells, but the heavier shells smashed in the roof.

The sheltered communication roads at Tsingtau effectively concealed and protected the movement of troops. The important roads had a high bank of earth along the exposed side, except where they traversed deep cuts, which in themselves furnished excellent protection. Some of these cuts were through solid rock, and thirty feet deep. The Germans were enabled to shift their mobile batteries rapidly and secretly by means of these roads.

The entanglement was especially efficient. The pickets had an iron shoe, about a foot square, bolted to the buried end, and in some instances, were set in concrete as well. They were not bent except where struck directly by shells. The attackers, in breaking through, cut the wire, but were unable to move the stakes.

Taken as a whole, the siege of Tsingtau is an excellent example of an active and determined defense, both in the matter of preparation, and the utilization, to the fullest extent, of the means at hand. That the garrison of Redoubt 3 allowed themselves to be surprised merely anticipated, by a few hours, the inevitable result of a general assault.



AFTER THE CONCLUSION of the war of 1870, Germany, guided by the iron will of Bismarck, divulged to Switzerland that the mailed fist had an itching palm for Swiss territory. Immediately an army of a hundred thousand Swiss mobilized on the frontier. They were the best armed, best trained, and altogether the most efficient soldiers in Europe. Bismarck concluded that the game was not worth the candle. If Switzerland had not been armed to the teeth and ready, that country today would be a part of Germany.—HUDSON MAXIM.

Extracts from an Address Delivered by Major General William F. Hase at a Meeting of Reserve Officers in Washington

IN the past few months there have appeared in the public press numerous statements with reference to the continuation or the disbandment of the Reserve Officers' Training Units in some of our colleges and universities. Also there have occurred among the student body at several institutions what amounted to riots of protest against this training.

Just what has stirred up this animosity against this type of instruction is difficult to ascertain.

There must be some force behind the propaganda, but it is so cleverly concealed by high sounding euphonious names that it is difficult to uncover the source. One of the agencies of propaganda is the National Student League, which now has contacts in 129 of our colleges and universities.

Its title does not indicate any extreme views. The President of the Sojourners, a Masonic order, recently stated that it is a purely communistic outfit, a tool of the Third Internationale. Any one who is interested in knowing the inner operations of the Communists in the United States should read the report made by William Green, the President of the American Federation of Labor dealing with communistic activities in the United States. This report was made to the President and is quoted in full by Congressman E. W. Gibson of Vermont in the *Congressional Record*, page 12966, June 27, 1934.

A freshman in college is easily influenced, and I am certain many join the National Student League because they do not investigate the real purpose of the organization.

I graduated from Wisconsin, a land grant university, which received timber lands under the Morrill Act of 1862. In return, all students were required to take two years of military training.

We had no choice in the matter. I believe I would have avoided military training if it had not been compulsory, because it would have been more pleasant to take a walk, a boat ride or go skating.

Those who are opposed to the R.O.T.C. system in vogue charge "Militarism"; those, in favor, answer "Pacifism." Let us ascertain what these terms mean. Webster's *New International Dictionary* defines the former as "Disposition to provide for the strength and safety of a nation or government by maintaining strong military forces," and then adds "Often used derogatorily of the

spirit which tends to confer undue privilege or prominence on the military class."

It is this derogatory use which is applied to those who would provide for the strength and safety of the Nation. The opponents of military training would have you believe that the "Militarists" are preparing to use force, to usurp the power of the civil authority and to install in place thereof military authority.

"Pacifism" is defined as "The spirit and temper which oppose military ideals, emphasize the defects of military training, and the cost of war and preparation for it, and advocates the settlement of international disputes entirely by arbitration."

I believe there are a great many people who have enrolled under the banner of Pacifism and who have done so wholly because they are sincerely opposed to war. So am I, and because I am I want to see this country provided with an adequate Army and Navy, so that if war is forced upon us we will be able to prevent hostile forces from landing on our shores. With a strong Army and Navy, the State Department may be able to arbitrate and settle international disputes without resort to force. A former President said, "Speak softly, but carry a big stick."

Congressman Thompson of Texas called the Pacifists "The Advocates of Foreign Aggression"; I would designate them as "Spineless Nationalists," who would turn the other cheek after the first affront. An extreme nationalist prates about his great country, and in so doing often gives offense. In anatomy, the spine plays an important part, as it supports the head where our thinking power lies. Can't you see, therefore, that a "spineless Nationalist" is a dangerous member of society?

I have been a military man for over 36 years, and I believe I am safe in saying that not one of my military friends is thinking of usurping the civil authority. We are serving the people to the best of our ability; we are their servants; they pay us. We only come into action after their Congress, elected by their votes, has decided that resort to war must be taken.

Any of us who were in France and saw the devastation wrought along the Western Front, even if we did not share the pain and suffering of the Bogs of Flanders, the Champagne or the Argonne, are for the elimination of war. But can war be eliminated? We have participated

in many gathering at peace tables, and after the Washington Conference of 1922, we, by precept and example, proceeded to carry out our promises made there. We scrapped the finest ships ever built, and destroyed the nucleus of the Woodrow Wilson Navy, which, if the building program had been continued, would have resulted in a Navy equal, if not superior, to any Navy afloat.

Have people or nations changed much since the beginning of time? Are they less bellicose? Are people in their human relations more tractable? Are there fewer burglaries, robberies, murders, or other offenses in the whole gamut of crime?

The answer to these questions appears in the headlines of your morning and afternoon papers. The 1920 census discloses that there were in this country at least 32,314 marshals, sheriffs and detectives; 82,214 policemen; and 115,553 watchmen, guards and doorkeepers, a total of 230,081 employed for the protection of our population. I am convinced that an accurate count of police protection today would increase that total considerably.

Let us look over our own country's history. I believe each of you honestly think we are a peaceful people. We do not as a nation covet any additional territory. We asked for no indemnity after the Boxer Rebellion in China in 1899, but when 20 millions were forced on us, we endowed philanthropic institutions for the Chinese.

At the Versailles Peace table we asked for nothing. In fact, we interposed no objection to the Japanese mandate over the German possessions in the Caroline and Marshall Islands which lie athwart our line of communications between Hawaii, Guam, the Philippines, and the Far East.

The average American citizen is too busy with his daily pursuits to give much attention to national affairs, much less to international affairs. He leaves all this to his Congressman! Not long ago, a classmate of mine at college called on me in Washington. He really is a very high type gentleman; one who specialized in economics at the university and one who is intensely interested in the solution of our problems, at least in theory. But strange to relate, he did not even know the name of the Congressman from his district!

But what does our history show? How many wars has this country been engaged in since 1776? Most of you will count off—the Revolution, War of 1812, the Mexican War, the Civil War, the Spanish American War, and the World War, a total of six. But let me answer.

If we count Indian disturbances, the Whiskey Rebellions, disturbances along the Canadian and Mexican frontiers, the Philippine Insurrection and the Boxer uprising, we have averaged one war for every one and a half years since 1776. Most of these of course were in the suppression of minor disturbances, and certainly were not started by the "Militarists."

But let us consider only the Big Six Wars which you have enumerated.

Were the Militarists responsible? Emphatically, no.

Under the definition of Militarism, I would class Washington as a militarist because he did advocate providing strong military forces for the strength and safety of the nation. He did not succeed in his endeavors.

You know the story of the Revolution; how the patriots fought with old flintlocks from behind boulders and trees, how they suffered at Valley Forge, and how under the guidance of General Von Steuben, that eminent and efficient German soldier, the Army of Washington finally became a force to be feared.

The War of 1812, the Mexican War and the Civil War were all fought by volunteers—short-service men. The Spanish American War was fought by volunteers, enlisted for the period of the war. The World War brought the Draft and the employment of our full man-power.

Anyone conversant with the history of the events leading up to these wars knows that no military man had anything to do with bringing on any of these wars. If we had had a National Defense Act like the Act of 1916 with its subsequent amendments, I feel confident that at least some of our big wars would have been avoided.

It has been aptly said, "Armies do not create war; it is war which creates armies."

Certainly we in Washington think about National Defense! That's what we are paid for! That's why we have a General Staff. That's why we have our Military Schools where our officers are indoctrinated with the best available thought on war problems.

It is the duty of the War Department General Staff to provide the ways and means for holding our shores inviolate with the minimum expenditure of men and money. The plans are mainly defensive against aggression by a foreign power. Naturally offense must be planned against a foe who has gained our shores in order that we may expel him.

Those who advocate the abolition of military training in our colleges are idealists! They do not understand human psychology. They forget past history—they forget "54-40 or Fight," or "Remember the Maine," or the action of the American Federation of Churches who beseeched President Wilson to send our fleet to prevent the further massacre of the Christians in Armenia in 1919 or the threat of Economic Boycott. They forget that we take out accident, life and fire insurance, and provide for police protection against theft and murder. Honorable Charles A. Plumley, Member of the House of Representatives from Vermont (former President of Norwich University) on May 5, 1934, stated, "The fate of civilization has always hung in the balance, but there are certain ideals of civilization which cannot be destroyed. The progress of humanity throughout the centuries is marked by the bloody battlefields which have made possible our achievements. * * * Nations, no more than individuals, will always keep their word. * * * When principle or honor is at stake, no man or nation is entitled to live who is not willing to fight to maintain it."

Bishop W. T. Manning on June 3 in the Cathedral of St. John the Divine in New York City said, "There are

situations, many of them, in which the use of force is not only justified, but is required by every principle of right, of duty, and of true manhood. There are situations in which a man who would not use force, and all the force at his command, would be unworthy of the respect of his fellow men.

"There are situations in which the use of force for the protection of others is an act of the highest self-sacrifice and love, and as long as sin and crime are in the world there will continue to be such situations.

* * * * *

"We all want to see war abolished, just as we want to see crime and disease abolished, but we cannot abolish war and crime and disease merely by publicly announcing we will have no part in them. War may be forced upon us. Albert of Belgium and that great Christian Cardinal Mercier were not making war, nor upholding war; they were fighting against war that was forced upon them."

These idealists forget that our Country is a World Power, which in the fulfillment of its mission, rubs elbows in the marts of the world.

When we engage in World Trade, we demand under International Law our full rights and privileges, the same treatment which is allowed the most favored nation. We have asserted a Monroe Doctrine in this Western Hemisphere, and have also consistently accentuated the Open Door Policy of John Hay in the Far East.

The last two administrations have declined to recognize the Japanese attitude in Manchukuo.

Are the "Spineless Nationalists" willing that we should withdraw from all participation in World Affairs? Shall we recede from our asserted policies, remain under any circumstances within the confines of our continental United States, and allow other powers to dictate to us just what we shall or shall not do? Was this the policy of Jefferson, Andrew Jackson, Grover Cleveland, McKinley and Woodrow Wilson?

Now let me for a brief moment discuss our System of National Defense.

In 1916, Congress passed the National Defense Act. This provided our first permanent military policy. It has been amended from time to time, but its essentials remain. It provided that the Army of the United States shall consist of the Regular Army, the National Guard, and the Organized Reserves and provided for the R.O.T.C. units and the C.M.T. Camps.

First—The regular Army was to consist of about 18,000 officers and 280,000 enlisted men (including Philippine Scouts). Due to the limitation of appropriation of funds, it has dwindled to 12,000 officers and 118,754 enlisted men.

Second—A National Guard apportioned among the States of the Union at the rate of 200 enlisted men for each Senator and Representative in Congress to be organized within one year from the passage of the act, to be increased each year until the total peace strength of not less than 800 enlisted men for each Senator and Representative shall have been enrolled.

At the present time, the National Guard consists of 13,309 officers, 198 warrant officers, and 171,284 enlisted men. Funds must be appropriated to insure the proper amount of armory drills, the annual camps including allowances for target practice.

Third—Officers Reserve Corps. The law gave the President the authority to prescribe the number. At present, there are 114,746 in the Officers Reserve Corps excluding those in National Guard. Of the above, 25,707 are inactive. Unless funds are appropriated to permit Organized Reserve officers to participate in field training, interest will lag. A man learns more quickly by practical work, where he sees the application of the theory expounded in his conferences and extension courses. It is vitally necessary that funds for summer training should be made available.

Fourth—R.O.T.C. Units. A senior division at universities and colleges, including the so-called land-grant institutions, and a junior division at other public and private educational institutions where a regular officer is detailed as P.M. S.&T. One hundred physically fit male students must be enrolled in units of Infantry, Cavalry and Artillery; in the case of other units, fifty are required. A two years' course is required as a prerequisite for graduation, three hours per week during the academic year and a six weeks' camp are required. These graduates constitute potential officer material.

Fifth—C.M.T. Camps. Training in summer camps of boys between 17 and 31 years of age. The training to be one month each year, and to continue for four years. Courses to be basic, red, white and blue. After 3 years of experience in C.M.T. Camps when I had command of the Harbor Defenses of San Francisco I became an enthusiastic supporter of these C.M.T. Camps. Those western boys were of High School age, were apt, and learned quickly. At Fort Hancock last July, I found that the students, here in the East, were of a type similar to those I had at San Francisco.

If a boy completes the four years of summer training, he becomes available for a reserve commission, after taking a certain number of extension courses.

Even, if a boy takes only one year, he gets some idea of military set up and training. All would be suitable as noncommissioned officer matériel. These camps should be maintained and Congress should appropriate funds to meet the requirements.

With particular reference to the agitation against the R.O.T.C. training, let me say that the attack is levelled at the solar plexus of the National Defense System.

This training is the most vital part of the Act.

After the War of 1812, Mr. Eaton, the Secretary of War, reported:

"It is not the policy of the country to retain, in time of peace, a large military establishment, particularly numerous soldiery; but it is of the utmost importance to educate and retain a body of officers sufficient for all the labors preparatory to war, capable of forming soldiers, of

(Please turn to page 471)

The Principal Problems in Organizing and Conducting Joint Operations of the Army and Navy

BY CAPTAIN L. A. WHITTAKER, C.A.C.

(With illustrations from history)

MILITARY and naval history offers many examples of joint military and naval operations and these are of varying interest and importance to the military student. In this article an attempt is made to consider some of the principal problems which confront the military and naval authorities in the organization and the conduct of joint operations and to illustrate these problems by pertinent examples taken from history.

It may be stated at the outset that the problems inherent in the joint operation of large military and naval forces were crystallized as a result of the experiences gained in such operations during the World War, and for the first time in our services we now have a well-defined basis on which to continue the further study of combined operations and to work out new problems as they arise. The principles underlying the joint action of our own Army and Navy have been published to the services and a thorough understanding of these principles should be obtained by every Army and Navy officer who wishes to be well grounded in his tactical knowledge.

The joint overseas expedition has been selected as the best example of joint Army and Navy action, covering as it does, features which do not occur in some other types of joint operation. Therefore the discussion which follows is from the viewpoint of such an effort.

While the decision to undertake a joint operation is not, strictly speaking, a problem of organization, it is desired to mention briefly some of the factors entering into the decision. Certainly the decision to embark upon a major joint overseas expedition should be based primarily upon its possible success, its influence upon the major objectives and policies, finally and most important, the decision to undertake such an operation should be based upon a complete military and naval estimate of the situation made by competent personnel. Too often does history record as the basis for such expeditions, political expediency, the desire for a cheap or quick victory, or the partial failure in other theatres of war.

The Dardanelles campaign of the World War affords an excellent example of what can happen when a decision is based on other than a proper military and naval estimate of the situation from all viewpoints. It serves to emphasize to us the fact that in planning any future joint operation for our own services our military and naval advisers must have a voice in the decision and be responsible for the formulation of a complete directive or war plan.

The problems of organization may roughly be divided into three general categories; first, coördination; second, personnel; and third, matériel. As we read the history of past operations we are more and more impressed with

the importance of coördination or command. On this rock many excellently conceived operations have been wrecked and those that have been outstanding successes had, as their basis, either unity of command or the best of mutual support and coöperation.

In our service we have finally accepted two different principles in order to secure coördination, the principle of paramount interest and the principle of unity of command. Under the first principle, that of paramount interest the authority and responsibility for the coördination are vested in the commander of the force whose functions and requirements are at the same time of the greater importance.

It is apparent from the generalities contained in this definition of coördination that much of the success or failure attained when using this method will depend upon the personalities of the two commanders, military and naval, immediately concerned. In those fortunate situations in which mutual confidence, impartial acceptance of both credit and failure and a subordination of self-interest for the good of the entire force exists, we shall expect to find that any directive imposing coördination is merely informative in nature. In the absence of the above requisites the directive imposing coördination may not prove of sufficient force to insure success but will simply aid in locating the reasons for failure after it has occurred.

In the application of the second principle the President as Commander-in-Chief of the Army and Navy has the authority to appoint a single commander for the forces involved. The unity of command method empowers the commander selected to coördinate the operations of the forces of both services assigned to his command by the organization of task forces and the assignment of missions, the designation of objectives and to provide the necessary logistic support; and to exercise the control during the progress of the operations which will insure the most effective effort towards the accomplishment of the common mission.

History is replete with illustrations that drive home the importance of coördination. Time and time again we read that due to a clash of personalities or to a lack of mutual confidence, failure attended an operation that otherwise had every prospect of success. Such for example is the reason attributed to the failure of such a promising enterprise as the English expedition in the attack against Cartagena in 1741. We find for instance that "the general did not push his work as fast as the admiral thought possible and the latter thereupon failed to coöperate with him, throwing obstacles in his way and treating him with such rudeness that success was impossible."

In our own history of joint operations we discover that an attack upon Fort Fisher in December, 1864, failed miserably because of the friction between the two commanders. Admiral Porter, indeed, going so far as to state that "General Butler's presence was the only cause of failure."

On the other side of the picture it is noted that when full coordination is attained by either of the two methods mentioned above, and with a proper consideration given to other factors, the chances of success are materially greater. Witness the record of a second expedition sent to capture the same Fort Fisher in January, 1865. With the same troops under a new commander who cooperated with the Navy forces the result was complete harmony between the two services and success crowned their efforts. In the Russo-Japanese War of 1904 we have a splendid record of coordination on the Japanese side and this was also the case in their operations leading to the capture of Tsingtau from Germany in 1914.

Certainly this question of coordination of command is vital to the success of any joint operation and it can be safely said that every officer should give the utmost attention to the details of cooperation whatever be his grade or responsibilities.

In the consideration of the strength and composition of a joint force we are confronted with the fact that modern methods of warfare require certain fundamental characteristics of organization in order to secure fire power, shock action, observation and movement. Naturally the mission of a joint force, the theatre of operations, the season of the year and the type of opposition to be expected would influence to a great degree the strength and composition of the force required. However the proper balance must be sought for both military and naval elements. This requires in general for the military arm, a strong force of aviation, artillery and wheeled transport to support the basic arm, infantry. The naval needs, perhaps, will not vary between as wide limits as will the military, yet vessels of the proper type, draft and armament should be selected in order to carry out the naval phases of the operation successfully.

The German expedition which captured the Baltic Islands in October, 1917, illustrates the value of a proper organization and it is worthy of note that a special force of infantry mounted on bicycles was employed to obtain movement and surprise in this operation.

The training of a joint force is a problem which has either been overlooked or at least its importance has been underestimated in the preparation of many past operations. It is no longer possible to expect success with haphazard methods, and the day is probably past when a joint operation can be conducted successfully without thorough preliminary training of both the military and naval forces concerned. In the problems of loading and unloading troops, animals, aviation and artillery, special training must be held. A soldier loaded down with extra ammunition, water and food, trying to climb down the towering sides of a ship on a rope ladder, is a potential

casualty unless he has had training in this particular maneuver. Likewise there are many situations connected with a landing operation which are foreign to the everyday training of the naval personnel.

The problems of properly grouping units for tactical needs and the combined efforts needed to make a successful landing and form a beachhead all require much preliminary study and call for special forms of training for the units involved.

In the record of the Dardanelles expedition one reads how the vessels of the British force were loaded without regard to the needs of the situation and the consequent delay in reorganizing and reloading gave the Turks a splendid opportunity to strengthen their defensive measures. The Germans on the other hand evidently realized the importance of preliminary training measures. We find, for example, that in the preparation for the final loadings of the ships to be used in the Baltic Islands expedition, one-third of the animals were kept on board, being replaced from time to time with others animals ashore. By this means and other similar well thought out steps the loading time was cut from three days to some twenty-two hours.

In connection with the organization of a joint force the supply of certain types of special equipment is of much importance. For example, if a landing is to be made in the face of organized opposition the need of special types of landing craft is evident. High angle fire weapons and special ammunition for use against land targets are needed by the naval vessels to support the landing properly, while transports of the proper type and size to permit rapid unloading of the landing force are considered essential.

The supply of a proper type of small landing craft is one problem which deserves special consideration. Their importance was revealed in the Dardanelles operation and stands out also in all peace-times maneuvers so far held in our services. The lack of suitable weapons and of proper ammunition also was serious with the British in the early stages of the Gallipoli landings. High angle fire with shrapnel and high explosive shell with non-delay fuses are of great importance in covering the early waves in getting ashore, but these must be supplied as special equipment as the usual naval guns with their low site, flat trajectories, and ammunition designed for use against water-borne targets, are entirely unsuited for the missions assigned to supporting artillery.

In turning to the actual conduct of a joint operation such as we have selected as an example, we are confronted by numerous problems which require serious thought. No major joint overseas operation could be undertaken with reasonable expectations of success without control of the sea and air. In many cases the securing of an advanced base may be necessary in order to provide the facilities needed for the refitting, refueling, supply and evacuation of the combined forces. If bombardment aviation is to be employed on a large scale an advanced landing field must be secured within bombing distance

of the objectives and the necessary facilities established for this type of activity.

Once the questions of an advanced base are satisfactorily disposed of the next problems presented are those concerned with the "where and how" to get ashore. Considering first the problem of where the landing or landings shall be made, it is found that several factors enter into the selection of these important areas and the final decision will affect both the military and naval features of the operation. Experience indicates that for a landing to be successful it must take place over a broad front, it must be covered by heavy concentrations of artillery fire and have the support of many machine guns and infantry cannon and it must be staged at such places as will permit of the rapid organization of a beach head or covering position. The general areas selected must further allow the attacking force favorable lines of approach to the final objectives without having to cross such obstacles as deep rivers, marshes or mountain ranges; and the troops must not be required to advance great distances overland in order to reach the final objectives.

In the selection of particular landing places the naval forces must give consideration to the water areas in which the supporting vessels and the troop transports will operate, the prevailing winds, currents and the range of tide and the amount of surf on the beach. In addition, the slope of the beach and the depth of water off shore, with suitable approaches for small boats on a broad front, are also of importance.

The military force is vitally interested in selecting beaches which are outside the zone of permanent fortification, which are free from hostile defensive measures, and which will permit mutual support. Sufficient landing places should be available to allow a landing on a broad front, thus requiring the enemy to spread his forces over a wide area and keep him in ignorance as to where the main effort is to be made, thus preventing the best use of his reserve. The landing places must further give easy access to terrain which can be secured without delay and which will give protection to the shore line from the fire of medium artillery.

Naturally, many of the above requirements will not be met in the beaches available and the final selection will be a compromise. In the final analysis, the navy must decide which beaches are suitable for landing operations and the army commander must then select from these the ones that best meet the tactical situation.

The record of the Dardanelles expedition is rich in illustrations and one often turns to it for light on a particular feature or principle, either for the proof of the soundness of a doctrine or the evidence of a violation of a principle. This is, of course, due largely to the fact that this is the one outstanding operation which was carried on under modern conditions of warfare and on an extensive scale. We find in this operation an excellent illustration of the importance of selecting landing places with a view to furthering the future action of the attacking force. When the British finally decided to make their

main effort at Helles and the secondary landing north of Gaba Tepe, the paramount consideration affecting the decision was the eventual success of the actual landings and not the final objective beyond the landing beaches. When progress could not be made towards the Narrows an attempt was made to correct the unfortunate selection by swinging the attack far to the north, but the golden opportunity had passed and failure was the result. Also the lack of a suitable supply of potable water ashore, and insufficient facilities for its supply from afloat, appears to have loomed large in General Hamilton's decision to forego landing on a broad front between Gaba Tepe and Suvla. The importance of this factor is realized when we learn that the Turkish General Staff has expressed the opinion that such a landing of the whole British force would have meant "the speedy capture of the vital area."

Once the landing places are selected the force is then confronted with the "how" to get ashore. At this stage of the operation are found the most difficult problems and these problems have been increased in difficulty by the advent of modern weapons and tactics of defense. In all military operations, both strategical and tactical, surprise has been sought for as one of the greatest advantages of the offensive. Strategical surprise has, in view of the improvement in modern means of observation, communications and transportation, become increasingly difficult to secure. It will seldom be possible to conceal the extensive preparations which must be made in organizing, equipping and launching a joint operation of any considerable size. Even if successful in concealing the early stages of preparation, once the expedition is under way preliminary operations such as the securing of advanced aviation or naval bases may disclose the purposes of the joint force and thus incur the loss of strategical surprise. However, every effort must be made to secure tactical surprise, and its attainment to a considerable degree will be possible if the time and direction of the final attacks can be successfully concealed.

The German operation in the capture of the Baltic Islands, mentioned previously, affords an excellent example of the securing of tactical surprise. The Russians were aware that an attack was impending and the Germans had lost strategical surprise. In spite of this, however, by keeping the actual day and hour of the attack as well as the selected landing places secret, the Germans were able to land with practically no opposition. As an example of the loss of both strategical and tactical surprise we can turn to the unfortunate attempt of the British to block Ostend harbor and the Zeebrugge canal. The Germans had captured a British motorboat patrol a few days prior to the attack and found aboard a complete plan of the intended operation.

The naval force with its convoy of transports must draw in close enough to the shore to insure to the troops a minimum time in the small boats or landing craft and to gain the most effective support of the naval secondary armament. As the small boats draw near to the beach, underwater obstructions and machine-gun fire will retard

the progress of the landing force and deplete the personnel. To overcome these factors it would appear that some attention should be paid to the design of small, landing craft which will incorporate such features as underwater wire cutting devices, machine-gun mounting, armor protection and the use of special ramps.

In connection with the movement of the small boats or landing craft from the transports to the selected landing places the piloting of these craft is a matter of great importance. If the landing is timed to take place at dawn the movement must be made under the handicap of darkness. The effects of weather, wind, tide and currents are variable and some means must be devised to insure accurate piloting. The importance of this factor was clearly demonstrated in the landing of the Anzac Corps on the 25th of April, 1915. The Corps was supposed to have landed on a 1,600-yard front, the right resting 800 yards north of Gaba Tepe. Due to effects of strong currents and other inaccuracies it actually landed on a very narrow front with the center some 4,400 yards north of Gaba Tepe. The confusion which resulted from this change in the plan, and the fact that the mistake brought the entire force up against the rugged Sari Bair, instead of opposite the low stretch of ground which gave easy access to the interior, materially affected the later developments.

Perfect coördination between the naval and military forces is highly essential at this stage of the operation. Time and space factors are in supreme control and every effort must be made to land the attacking force at the proper times and places that the tactical plan demands.

Shore defenses with their trenches, obstacles and organized fires require large concentrations of artillery and infantry cannon fires to neutralize the defenses sufficiently to allow penetration of the defended area. In the early stages of the landings this artillery support must be furnished by the naval vessels which are covering the landings. Mention has already been made of the necessity of high-angle fire weapons and of suitable ammunition. In addition this fire-support to be effective must be co-

ordinated with the attack and air observation will generally be essential.

In summing up the problems of organizing and conducting joint operations, it is brought home to us that in the future as in the past the formulation of a sound tactical plan is of prime importance. The problems of coördination or command, the proper size and composition of the forces to be involved, the preliminary training of these forces, and the supply of proper type equipment in suitable quantity are of second importance and must be given proper consideration in any particular situation. During the actual conduct of the joint operation we shall find that the old problems which confronted past commanders still remain, and modern conditions and methods of warfare have increased the difficulties of these old problems and created new ones. Weather conditions with their attendant variables, wind, fog, tide and currents will always be present as important factors. Climate and season will present their advantages and disadvantages and terrain will weigh heavily in the future as it has in the past.

Modern means of defenses such as air forces, submarines, mines, the use of chemicals, communications, transportation and defensive works will increase the strength of the defending forces. The offensive, on the other hand, will find their difficulties intensified due to the complexities inherent in large military and naval forces required to team together and to the serious problems of supply involved with these forces.

In conclusion, it appears that the subject of combined operations is an extremely important one and that in view of the complex problems which are presented by the conduct of such operations, special efforts should be made to conduct training in maneuvers of this nature during peace times. These maneuvers, moreover, should be on a sufficiently large scale to afford the military and naval commanders and their staffs an opportunity to perfect, by drill and experimentation the necessary technique to conduct a joint operation successfully.



THINGS MILITARY must be learned, not from philosophers, but from experience; from the experience of others, by way of military education, and from one's own experience, at the cost of blood, sweat and hard work. The more complete the former, the less likely are valuable lives likely to be wasted in acquiring the latter.—
NAVAL INSTITUTE PROCEEDINGS.

Fire Adjustment

BY CAPTAIN LEONARD DAVIS, C.A.C.

NOTE: The first of this series of articles appeared in the September-October issue of the COAST ARTILLERY JOURNAL. It traced through the subject up to the period of the World War. The following article, second in the series, shows the influence of the World War.

IN these days of restricted ammunition allowances, slow moving tugs, and lack of material targets it is very difficult to get actual experience in adjustment of fire on naval targets under conditions which will approximate those of war. This should be recognized, and every effort made to simulate war conditions. In order to gain the maximum benefit from all firing, none should be attempted without thorough prior preparation, including the complete assimilation, by the adjusting officer, of the principles involved in the application of the rules for fire adjustment. The extracts appearing in this series of articles have been selected as an aid in this process.

"Observation of Fire," by Major Edwin Landon, C.A.C. C.A.J., September-October, 1915, page 129:

There are two kinds of observation of fire recognized in our service: viz., spotting and instrumental observation. For guns of five inch caliber and above, arbitrary range corrections are now prohibited at target practice, so that observation of fire has no application for those guns under target practice conditions. For other guns and for mortars no prohibition exists. All battery commanders are free to use arbitrary deflection corrections. By an arbitrary correction is meant one based on fall of shots, other than "trial" shots, as observed either from the battery firing, or from any point on shore in communication with the battery firing.

The prohibited practice was indeed arbitrary when the order was first promulgated and it was very wisely stopped. However, it is believed that we are now in a position, as far as equipment and training go, to resume consideration of what may be accomplished by observation in the way of advantageously adjusting the fire not only of mortars and of rapid fire guns, but of other guns as well. As in the case of all technical questions, this one should not be considered settled for any length of time. It is believed that the sober second thought which is always induced by a prohibition has had its effect, and that we now have, or may quickly obtain, that desirable knowledge of what our guns will really do, which is a necessary basis for the sound judgment essential to obtaining any real advantage from observation of fire in making adjustment during the progress of firing.

The practitioners of any mechanical art might be classed as theorists, "practical" ones, empiricists, and the utterly thoughtless who are soon eliminated. Empiricism is dangerous without correct theoretical knowledge to guide it. Too many of us were in danger of becoming empiricists pure and simple when the prohibition referred to went into effect, and this prohibition undoubtedly has forced a study of an acquaintance with basic theories, which it is

believed it was primarily designed to do. The practical gunner must know his theory and above all must thoroughly understand, whenever he compromises with it, that he is doing so. As a matter of fact it must be conceded that reliance upon the results of trial shots for the determination of velocity is empirical; it is also practical, but the question should always be asked is it practical enough to cover all cases. At present this reliance on the fact observed in a majority of practice records that: "the variations (in velocity) exhibited in any group of trial shots continue *practically* the same throughout the series of record shots which follows that group; or, in other words, the dispersion of the record shots has been *practically* the same as the dispersion of the trial shots which furnished the data for these record shots." (Quoted from Regulations for Instruction and Target Practice of Coast Artillery Troops, 1914.) This is all good to know. Exceptions to the general rule have been observed, however; and, in my own experience, the exceptions have been sufficiently numerous to make it seem worth while to see how observation of fire, properly used, might have helped. Observation of fire, *properly* used, will cause no one to make an arbitrary correction in any case where the dispersion of the record shots does approximate the dispersion of the trial shots. Possibly it is only in the minority of cases that observation of fire would have much practical application at the ranges to which we are accustomed. For really long range hitting I believe that observation of fire is essential.

"Notes on Gunnery," by First Lieutenant Geo. A. Wildrick, C. A. C. C.A.J., January-February, 1916, pages 58 and 65:

OBSERVATION OF FIRE

a. This is often spoken of as an alternative for our present methods. Before we go any farther, let each one who is wholehearted for observation of fire ask himself how far he has investigated the probability of hitting of his battery as demonstrated by previous firings. The study of the probability of his battery and position finding service is fundamental to success in observation of fire. Without the knowledge of when a deviation from the target exceeds the probable error and when a deviation from the target is less than the probable error the observer is quite at sea. The writer fails to see how a correction of fire based on rough, hasty approximations of distances over or short will get more accuracy out of our matériel than the thorough study before firing of a large number of deviations accurately measured.

b. * * * What criterion of accuracy have we? We have the probable error for 8,000 yards which can be taken as sufficiently exact for the long range work. We have seen that the probability of hitting is 58%. We can expect 42% misses; of these one-half should be over (which we cannot see) and one-half should be short. Therefore we should expect about 21% short. That is, if about one out

of five shots are falling short we can rest as secure, as we can be by any other method, that our center of impact is on the center of the target. If a greater number than this out of the first ten shots went short, there would be a temptation to apply an arbitrary correction. The idea of 100% of hits should be avoided like the plague. One out of five or six short is good insurance.

Similarly, for the type target broadside-on or with the keel making an angle of 45° with the line of fire. We see that the probability of hitting is 55%. We can expect 45% to be misses when the center of impact coincides with the center of the target. Therefore we can expect 23% to fall short. Here we have the rough rule again of one out of five short. Some such simple rule is applicable both to night and day firing; it requires no *quantitative* determination of overs and shorts, which is extremely difficult of attainment; and it is about all that a battery commander could remember in the heat of an action when there are sure to be so many other calls upon his attention.

Report of Chief of Coast Artillery to Secretary of War, 1918. C.A.J., January-February, 1919, page 128:

The necessity for the observation of fire and the adjustment and maintenance of the center of impact upon the target by means of such observation was recognized early in the war. The development of means to accomplish this came rapidly, and at present, fire without observation may be regarded as the exception. In the war zone practically all targets are stationary. In the coast defense service practically all targets are moving. This adds materially to the difficulty of applying corrections based upon observation. However, any system which does not contemplate such corrections may be regarded as obsolete, and it is believed that the experience of our officers, gained in the field, together with their ingenuity in overcoming difficulties of this nature, will enable a satisfactory solution of the problem to be reached. The subject will be given attention in all coast defenses, and the suggestions which reach this office will be scrutinized with care. The Coast Artillery Board at Fort Monroe has been directed to study the subject and all schemes which warrant it will be given a practical test as promptly as possible.

"Percussion Precision Adjustment of Heavy Artillery Fire," by Colonel E. J. Cullen, C.A.C. C.A.J., January, 1920, pages 14, 33 and 34:

Why Fire Adjustment is Necessary.—If a gun were fired a great number of times with the same laying and under the most favorable conditions for accuracy, all the projectiles would not strike the same point, but it would be found that the various points of impact were dispersed over a certain area, and that these points were more or less systematically disposed about the mean point or center of impact. This is a definite and fundamental fact upon which the entire theory and practice of artillery fire is based. It is a condition that we cannot evade, for, as will be shown later, this condition is caused by certain factors that cannot be controlled. Fire efficiency, which requires the maximum possible effectiveness of fire, demands that the existence of this condition be recognized and that this law of the dispersion of fire, with all its varying phases, be used to the utmost advantage.

The location of a single point of impact with respect to the objective is due directly to two separate and distinct factors. In others words, the deviation of a single point of

impact, measured from the objective, is an amount directly chargeable to two separate divergences that may be either cumulative or compensating in character. One of these divergencies is the distance of the particular point of impact from the mean point or center of impact of the series, and it is directly chargeable to Accuracy of Fire, that is, to the accuracy of the matériel. The second divergence is the distance of the center of impact of the series from the objective and this in turn is directly chargeable to "Accuracy of Practice," that is, to the accuracy of the personnel. It will be interesting to make a complete analysis of each factor affecting the Accuracy of Practice. After such a study, we can proceed to a consideration of the various methods of fire adjustment with their involved phases of "Trial Fire" and "Improvement Fire." We can then hope for a clearer understanding of the purpose of fire adjustment, of the principles upon which it is founded, and the difficulties that it attempts to overcome, and of the methods and means that it employs.

b. The Purpose of Fire Adjustment.—It has been the purpose of the preceding paragraphs to emphasize the fact that in conducting artillery fire, the Fire Director who is seeking accuracy is confronted with many obstacles. He is attempting accurately to place upon a distant objective of limited area, the separate impacts of several guns. The methods and means of computation furnished him are not sufficiently accurate to permit of his determining the exact elevation and deflection necessary to use in order to point the guns exactly upon the target. Nor is he always able exactly to apply the elevation and deflection that he does compute. Furthermore, even if he could accurately compute and apply the exact elevation and deflection there are certain inherent errors in the armament itself that would cause a dispersion of the points of impact. In other words, after having used the utmost care and effort in the computation and application of a given elevation and deflection, the Fire Director, at the instant the projectiles leave the muzzles of his guns, can have no assurance that the points of impact will be located nearer to the objective, than within a reasonable distance thereof. It is apparent that, if the Fire Director desires more exactness of fire than this, he must be prepared to take advantage during the firing of information as to the developed deviations of the points of impact. This information, when considered in conjunction with the dimensions of the total zone of dispersion of the armament, will furnish a clue as to the accuracy of the computation of the elevation and deflection necessary in pointing to meet the actually existing conditions. Hence it can be stated that the purpose of fire adjustment must be to use the information obtained as to the developed deviations of the points of impact, in an effort to approximate the value of that elevation and deflection which, it is an even chance, will give deviations that will not exceed a definite amount, that amount being the probable error of dispersion.

c. General Principles of Fire Adjustment.—If all errors affecting the Accuracy of Practice could be overcome by this method of approximation that is based upon the observation of the deviation of the impacts; that is, if all these errors were systematic errors and hence could be eliminated by simple corrections; the Fire Director could hope to determine eventually the exact pointing that would place the center of zone of dispersion of each gun exactly upon the objective. Then he would have determined the value of that elevation and deflection which would give deviations that, it is an even chance, would not exceed the probable error of the armament. But we have seen that many of the errors affecting "Accuracy of Practice" are vari-

able errors and can never be entirely eliminated. All that can be hoped for is to attempt, by some method, to determine the approximate values of these variable errors, and, by the application of suitable corrections, materially to reduce their effect. Therefore, adjustment fire will always be found to consist of two distinct phases, known respectively as trial fire and improvement fire. In the first phase, trial fire, by the proper use of the information as to deviations, effort is made to approximate the value of that elevation and deflection that will so place the total zone of dispersion of each gun as to positively include the objective. In the second phase, improvement fire, effort is made, by similar methods, to move each gun's zone of dispersion so that the centers of these zones will coincide with the objective. That would be the ideal adjustment, if it could be accomplished.

"Percussion Precision Adjustment of Heavy Artillery Fire," by Colonel E. J. Cullen, C.A.C. C.A.J., February, 1920, page 145:

Conclusions.—The following are some of the important principles of fire adjustment that every Fire Director should keep before him, and these principles are general to any adjustment fire against either stationary or moving objectives:

1. Every gun has a zone of dispersion which is a function of the range.

2. The relative dispersion of the guns of a battery is absolutely dependent upon the uniformity of the ammunition, the care of the guns, and accuracy of the personnel in loading and laying.

3. The average dispersion of the shots of a salvo will be less than twice the value of the probable error if proper care has been exercised.

4. The probable error given in the firing table is but a measure of the zone of dispersion for that range, and is not a measure of the probability of hitting the target.

5. Every method of fire adjustment requires the use of a reasonably certain means of observation of fire.

6. Every method of fire adjustment is based upon the principle that the indeterminate error made in the preparations for firing be kept relatively systematic.

7. Fire adjustment must consist of two phases—trial fire and improvement fire.

8. During trial fire the sense of an elevation (over or short) can be determined only by obtaining two observations at this same elevation and thereby obtaining either a verification or a contradiction.

9. Trial fire should seek to develop an elevation that will place the zone of dispersion so that it will embrace the objective.

10. Improvement fire should seek to develop an elevation that will place the center of the zone of dispersion upon the objective.

11. Careful study of every feature of the firing is absolutely necessary if the Fire Director is to be prepared to master each problem as it arises. The Fire Director must have full confidence in his own ability to judge accurately and quickly, and his judgment must be based upon sound training. As each case arises he should know exactly what to do and how to do it.

"The Beaten Zone," C.A.J. for April, 1920, page 373:

b. Deflection Adjustment.

34. A bracketing deflection is always sought.

35. The probable error in direction, for most guns, in general does not exceed three mils.

36. Deflection corrections for the full deviation in direction should be made until the deflection deviation (measured from the battery) is less than three mils. Thereafter, no deflection correction is made, until three successive deflection deviations, of the same sense, have been observed; when the deflection is corrected by the mean of these deviations. However, it must be remembered that each range correction necessitates a drift correction, and the deflection angle must therefore be kept corrected for this variation at all times.

37. Calibration corrections of deflection for individual guns should not be made until the impacts are in the immediate vicinity of the target.

"Observations on Artillery Practice," by Brigadier General John W. Ruckman, U.S.A. C.A.J. for November, 1920, pages 446 and 479:

In 1907, Commander Sims, United States Navy, submitted a report upon the methods used in the United States Coast Artillery, in which he severely criticised the methods in question. Many of his criticisms, as presented in his report, were based upon misunderstandings and misconceptions, but one was made which, in the opinion of the writer, was well taken and has not received the consideration it deserves. In this connection he states in substance that the Army system is deficient in not embodying some means of observing shots, estimating or measuring the errors thereof and correcting for the same.

* * * *

In their opinion with regard to the question of observing splashes, officers differ. Those whose experience has been limited largely to low sites, to high sites or to intermediate sites are, in each case, in a high degree influenced thereby, and each class holding views based upon the special conditions with which they are familiar, fail to understand and appreciate other points of view. In fact each kind of site affords, in the premises, advantages and disadvantages having an important bearing on local solutions of the problem.

Extremely hazy ideas exist amongst artillery officers as to the best method of proceeding in reference to correction of range errors in gun practices. They have never received that especial instruction and practical training necessary to qualify them to treat the question thoroughly; the requisite firing data as an aid in the attempt have never been determined and prepared for immediate use; and tentative efforts in the same direction by battery commanders, though tolerated for a time, have always been discouraged.

As a result of the Sims controversy, a comparison was made between results secured by the authorized method in which corrections for ranges were not made during record practice and those obtained by applying range corrections during the same. The conclusion drawn from the comparison was to the effect that the number of hits was superior in the former case to that in the latter. This conclusion appears to constitute a decisive argument in support of the system now in use. In this connection it may be said that no matter what may be the merits of the present system this comparison and conclusion are not material to the issue. Methods substantially as now prescribed have always been encouraged, facilities to advance their efficiency provided, careful instruction continuously imparted and teamwork therein promoted on all occasions. On the other hand the second method, though tolerated under restrictions, has always been discouraged and applied only to a limited extent, no facilities therefor have ever been

provided, no instruction therein has ever been given, and teamwork in connection therewith has been conspicuously absent. Conclusions drawn from comparisons based upon conditions so favorable to the one and unfavorable to the other can scarcely inspire confidence in the justness or accuracy of the result.

b. Conclusions.—Having now reviewed the various elements involved in methods of artillery fire and considered the same in their relation to errors of shots with view to their elimination or final correction, the required comparison may be made and advantages and disadvantages of ballistic and method by observation of splashes may be stated. It has been mentioned elsewhere that the system now in use cannot be applied in war. It appears probable that in a crisis battery commanders would find themselves confronted with hostile ships without any system which they could apply in the premises, and they would be seriously embarrassed as to the proper course to pursue. The observation of splashes of shots fired at a point in the water cannot be observed any better than if fired at a moving target or the enemy; the service cannot count on using trial shots daily since the expenditure of ammunition would be prohibitive, and in using or trying to use them otherwise, were the scheme practicable, the effort would be futile since data obtained days or weeks beforehand would not accomplish the object in view, and no means would ever be available for checking up or correcting the fire, a condition illustrated by the series of shots quoted and discussed above. In addition to the objection just given, the foregoing study of errors of trial shots has called their credentials into question and thrown doubt upon the advisability of using them as now provided. This argument is based upon the target practice records of the last six years. The method would be very expensive and the small increase in hitting efficiency in record practice over that of trial shots, namely, 14.7%, 14.7% and 10.8% for the 8-inch, 10-inch and 12-inch guns, respectively, appears to be an extremely small return for ammunition expended.

The large number of hits now indicated in trial shots are thrown away, whereas, if fired at the enemy would effect great damage and, in cases where three or four are effective, a hostile ship might be crippled or put out of combat without recourse to further firing, thereby effecting a great saving in ammunition.

“Observation and Adjustment of Fire on Moving Targets,” by Major Quinn Gray, C.A.C. C.A.J. for May, 1921, page 429:

Before discussing a suitable means of recording the deviations observed and the corrections applied, it might be just as well to discuss briefly the matter of who would best determine the corrections to be applied. It is not the intention of the writer to assert himself in such way as to invite an argument with the Editor who has the power of the press behind him; but certainly there can be no harm in merely expressing an opinion.

It is respectfully suggested for consideration therefore, that during action the officer personnel of a battery should be free to perform their proper functions of command, supervision and coördination; to exercise their technical skill and tactical judgment when occasions demand it, to deal with all manner of contingencies and even, in certain important positions, to replace enlisted men who may fail to perform their duties properly in the crisis. In consequence, it is submitted further that the operation of determining what corrections should be applied during action ought to be just as much a matter of routine as the operation of determining where a set-forward point should be

located, and ought to concern the battery commander and range officer in exactly the same way, i.e., it ought to concern them only as a matter of thorough training of enlisted personnel before practice or battle action.

Prior to the World War, when we depended more upon our imaginations to visualize an actual combat, most of us who were then battery commanders reserved this, and as far as possible all other important details for our personal attention. The result was that even in target practice the battery commander was so overloaded with details and petty responsibilities that he generally appeared to mistake the command “Commence Firing” for a signal for him to begin throwing fits. Such a system obviously must fail in action. But for those who piddled in details belonging properly to their subordinates, the little city of Blois still would be famous only for its historic chateau.

“Spotting for the Coast Artillery,” by Brigadier General Johnson Hagood, U.S.A. C.A.J. for February, 1924, page 88:

They tell the story of a professor at West Point who said he had no confidence in logarithms. And a famous surgeon in France said that the General Staff did not like to be hedged in by the multiplication table. General Weaver, whose name will go down in history as one of the great pioneers in the technique of modern coast defense, said that the Coast Artillery was divided into two camps: those that believed in ballistics, and those who believed in guesses. He described the latter by saying that first they guessed their error and then they guessed how to correct it.

Thanks to our friends up in the air, we no longer have to guess our error. All reports indicate that the airplane observations tally with the measured instrumental observations to a degree that is quite remarkable. This part of it is satisfactory. So satisfactory in fact that whenever the air observer puts the shot nearer to the target than the range rake observer, the battery commander feels confident that the latter is seasick or otherwise in error.

But the guessers still have the problem of how to correct the error after they get it. And it is their pleasure to stand upon the windy parapet of a 12-inch battery equipped like Alpine Climbers and shout the cheering words—“Up Five Hundred.” “Right—I should say Left-Ten.” Profanity is a useful adjunct when the shots refuse to obey the order of command. One Battery Commander whom I know, when things did not go well, sought solace in his telescope through which he gazed intently at the target as it gracefully followed in the wake of the tug, on its way back to the starting point of the course.

The question as to whether “Spotting” or “Correction of Fire by Observed Error” is or is not a desirable thing for Coast Artillery was fought out once between General Arthur Murray—on one side, and the father of modern naval gunnery—Admiral Sims—on the other. Theodore Roosevelt decided between them and sided with General Murray in the negative. Subsequent to that, a careful analysis was made by Captain (afterwards General) P. P. Bishop in the Chief’s office. He considered all target practice reports for a period of four years and his analysis showed very clearly that those who corrected for observation of fire did not get as good results as those who did not. In other words, the old-time painstaking careful battery commander who made sure he was right and then went ahead, had it all over the man who faltered along, feeling his way as he went. This however, was in the days of two guesses.

"A Reply to General Hagood," by Colonel H. J. Hatch, C.A.C. C.A.J. for March, 1924, page 172:

Within a few years the pendulum of Coast Artillery doctrine has swung from the extreme of prohibited corrections based on observation of fire to the extreme of dependence on observations, the latter being regarded, not simply as desirable when practicable for verification or adjustment of the original ballistic correction, but as a positive necessity for effective fire.

While General Hagood in his excellent article has pointed out some of the fallacies of dependence on spotting, it has not been demonstrated that arrangements to provide continuous and precise information concerning the fall of our shots are without value when observation is practicable, as is conceivable it may be, under certain conditions.

You may not be willing to follow the General to the pre-war extreme, but neither can you dismiss his contention that generally better target practice has resulted without spotting corrections than with them, for the records back him up. It is possible that there is a sounder doctrine than either extreme, but is between the two, that is, entire dependence on spotting or on a proper preparation of fire without equipment for subsequent corrections, the writer is inclined to favor the latter.

In placing entire dependence on the original ballistic correction, as we did in pre-war days, it was admitted that inaccuracies in meteorological and velocity determinations occurred, but experience indicated that better firing resulted from accepting these errors than by disregarding the evidence of the carefully determined ballistic correction and basing corrections entirely on the evidence of the observed deviations of a few shots fired rapidly at a moving target. It should be noted that meteorological measurements are more reliable now than before the war.

"Methods of Fire Adjustment," by Brigadier General R. E. Callan, U.S.A. C.A.J. for September, 1924, page 207:

Observations and Adjustment of Fire.—There has been considerable discussion among Coast Artillery officers about spotting, the value of observation of fire, and the adjustment of fire. Some feel that we have gone too far in permitting adjustment of fire to be made as a result of observation of fire at moving targets. They feel that we should go back to the pre-war period and forbid officers adjusting their fire other than to make the ballistic corrections determined from meteorological observation and corrections as a result of trial fire.

An examination of target practice reports would, I think, bear out the contention of officers that spotting is a great source of error in Coast Artillery firings. This, I

believe, is due largely to the improvised material that has been issued for spotting, and to the haphazard way that some spotting details have been trained. An observer, spotting, must be just as well trained as any other observer in the battery. The equipment used by the spotting detail must be accurate, or, necessarily, the results will not be so. In some instances, careful preparation prior to target practice has not been made. A few officers have felt that this careful preparation was not so necessary since correction for the deviation of shots from the target could be overcome by applying corrections, based on observation, to succeeding shots. This reasoning was, of course, wrong. It requires just as much care in the preparation for target practice with spotting as it does when spotting is not required. In fact, more care is required, since the training of spotters is an added burden to the battery commander. When the ranges are short and the supply of ammunition is limited, spotting, except as a matter of training, is not so necessary. It is believed, however, that observation of fire and corrections as a result of this observation are a necessity and should form a part of the instruction of a Coast Artillery organization. A well-trained organization will spot to advantage; an untrained one will add to its errors by spotting.

Reference to a file of COAST ARTILLERY JOURNALS will reveal much more interesting matter on the development of this subject of fire adjustment. A source of much practical information is to be found in the numbered *Coast Artillery Memoranda* published each year by the War Department under the direction of the Chief of Coast Artillery. The value of this latter source to the interested officer cannot be overemphasized and a detailed study of them beginning with No. 7 of 1926, will provide information which can be obtained in no other way excepting by personal research and actual experience. Current rules for the adjustment of fire are published in TR 435-280, Coast Artillery Field Manual, Vol. I, and in the 1934 edition of Special Text No. 35 which has been prepared under the direction of the Chief of Coast Artillery for use in the Extension Course of the Coast Artillery School. Special Text No. 35 contains (in Appendix No. 2) a description of "The Dispersion Slide Rule for Use in Fire Adjustment Problems with Simulated Fire." This device was described in the September-October issue of the COAST ARTILLERY JOURNAL for 1933.

NOTE: Third installment of this series will contain practical problems in the adjustment of fire followed by approved solutions based on the latest doctrines.



IN MODERN WAR *munitions are a far greater and more difficult problem than men.*—
SUMMERALL.

Duties of An Adjutant

BY CAPTAIN M. E. CONABLE
C.A.C.

THIS article is designed to deal with the duties and responsibilities of the adjutant of any independent command (not commanded by a general officer) or the adjutant of a regiment or separate battalion which may be a part of a larger command. In the case of a command the size of a brigade or division, the duties of the adjutant are the function of an assigned member of the Adjutant General's Department who is assumed to be a specialist in that work. For the other commands mentioned, any junior officer, regularly assigned to such organization, may be detailed to perform the duties of adjutant and it is for him that the following remarks are intended with the hope that they may prove of some small benefit, particularly to younger officers with little or no experience prior to such detail. The duties of the adjutant of a battalion within a regiment are not numerous and are comparatively simple, therefore, they will not be mentioned in this article.

Qualifications. An officer detailed as adjutant of any command is placed in a position which requires many personal attributes among which may be enumerated the following:

- a. Tact.
- b. Diplomacy.
- c. A complete knowledge of both Army and Training Regulations immediately pertaining to his branch and unit and the ability readily to find data in other regulations and manuals whenever this may be required.
- d. A cheerful disposition and an even temper, coupled with a readiness and ability at all times to subordinate personal arrangements and desires on short notice at the call of duty.
- e. The ability to write a legible hand. (This will enable the office clerks to transcribe manuscript with a minimum of errors and lost time).
- f. An exhaustive knowledge of the locality in which serving. This includes acquaintance with the leading civilians, newspaper personnel, chiefs of police and responsible officers of civic bodies.
- g. A good memory for names and faces, since it usually falls to his lot to introduce guests at receptions, balls and like functions.

An adjutant, in order to function efficiently and logically with respect to subordinate units, should have served at least one year with a subordinate unit, preferably as a unit commander.

An officer with an extensive and continuing medical record or one who is habitually on sick report should not be detailed as an adjutant, for the duties often require the ability to withstand both physical and mental fatigue, particularly in time of war when a headquarters is op-

erating under high pressure for extended periods of time.

Relation to the Commanding Officer. The adjutant is virtually the private, confidential and social secretary to the commanding officer and the buffer between the commanding officer and the rest of the command.

When first reporting for duty the adjutant should obtain a statement of general policies from the commanding officer and, thereafter, not bother him with routine details. It will, of course, be necessary to call on the commanding officer for decisions as special cases arise, but these should be kept at the minimum consistent with announced policies. The commanding officer must, however, be kept informed of actions taken by the adjutant other than mere routine, as otherwise, when not so informed, embarrassing situations may arise which could easily have been avoided.

In the event of a new commanding officer being assigned and assuming command it is an old custom of the service and a very courteous gesture for each member of the staff to offer his resignation as a staff officer to the new commander in order that he may have the opportunity of making his own staff selections.

The usual form of the resignation, if written, is as follows:

"To: The Commanding Officer.

Due to the advent of a new commanding officer and following a custom of the service, I herewith respectfully tender my resignation as adjutant of this command."

The foregoing would not apply to post quartermasters, surgeons, finance officers or the like who, by virtue of being the seniors of their respective staff corps on duty with the command, are automatically placed in the positions of staff officers, but it does apply to any staff officer who holds his position as a result of appointment or detail by the commanding officer.

If the commanding officer does not see fit to accept the resignation and desires the present incumbent to continue in office he will usually return the resignation informally with a penciled note to that effect.

Relation to the Staff. The adjutant is, in effect, the chief of staff, unless there be a field officer available for the position of executive officer, and as such exercises administrative jurisdiction over the staff activities. The technical work of the various staff officers is not properly a concern of the adjutant. Staff officers are, like the adjutant, the personal advisors of the commanding officer in matters pertaining to their respective activities.

Relation to Other Officers. All officers of the post or regiment look to the adjutant for definite and correct information as to orders, regulations, customs of the service, etc., and the adjutant must keep himself well informed and be always ready and willing to give advice or look up obscure points pertaining to the service, particularly for the benefit of newly appointed officers. An

adjutant can do much either to advance or mar the official or social harmony in the command, and one who is continually quibbling with officers creates discontent. A personal word or phone call will often accomplish more in the way of coöperation and coördination than will an official letter.

As far as humanly possible rosters should be kept on all duties. Often a command will contain one or more officers who are always ready and willing for any duty to which they may be assigned. This creates a tendency to assign them to all of the "short-notice" or unpleasant details, which is a situation to be studiously avoided. Although the officer concerned might not object, the chances are a hundred to one that his wife will (if he is married) and there goes a large part of the social harmony. Bachelors should not be discriminated against in this respect. The fact that they are not married does not make them any more available for duty than is the married officer.

As soon as orders are received assigning a new officer to the post or regiment the adjutant should at once write the officer a letter giving as much information about the post as possible including routes thereto in case the officer is driving a car on his change of station. He should be asked for a reply giving the size of his family, date of arrival, method of arrival, etc., and if arrival is by train the adjutant should arrange transportation for the officer and family as well as for his baggage. Arrangements should be made to have his quarters available for his immediate occupancy including bedding, dishes and a small amount of groceries which would suffice until the officer himself could make his arrangements after arrival. If some officer already at the post is acquainted with the arriving officer it is a pleasant custom for him to take the new officer into his own quarters until the assigned quarters are ready for occupancy.

On the arrival of the new officer the adjutant should see that he is advised of the prevailing customs as to official and social calls and should have orders ready assigning him to a unit for duty.

Duties, Official. Under the present regulations a regimental adjutant, in addition to his duties as adjutant, commands the band only, although it is the custom in some regiments for the adjutant to also command the headquarters battery or company, and the noncommissioned staff.

The adjutant is charged with the keeping of all headquarters records, rosters, details and the like. He handles all correspondence insofar as the commanding officer has delegated that duty to him. (Some commanding officers prefer to open and personally answer all mail addressed to "The Commanding Officer.") Whenever possible the commanding officer should permit the adjutant to handle all matters of a routine nature such as records, rosters, details, routine indorsements, orders, etc. As Colonel Moss has stated in his book on the subject—"An officer to whom a certain amount of authority cannot be delegated, and who is not allowed to assume a certain amount of

responsibility, is not fit to fill the position of adjutant and should be relieved at once."

It must be remembered that the official duties of the adjutant pertain to the office only, and should not be promiscuously discussed outside of office hours as, in this way, confidential information may very easily be disseminated to the detriment of the service. This comes under the head of gossip which is a pernicious habit, always leads to misunderstanding and trouble and is to be strongly condemned and studiously avoided.

It usually falls to the lot of the adjutant (if not, to the plans and training officer) to make details for boards of officers, courts-martial, target practice, etc., and, for this reason, the adjutant should have a good working knowledge of the requirements in each case and of the capabilities of the various officers in order that proper assignments may be made to permit the required work to progress smoothly. It is sometimes desirable to detail young officers with little or no experience as members of boards, etc., in order to broaden their knowledge, but this should not be done if, by so doing, a financial or legal tangle might result.

An adjutant has certain restricted powers as a notary public. The following is quoted from the Manual for Courts-Martial, 1928: "The adjutant of any command shall have the power to administer oaths for the purposes of the administration of military justice and for other purposes of military administration, and in foreign places where the Army may be serving, shall have the general powers of a notary public or of a consul of the United States in the administration of oaths, the execution of legal instruments, the attestation of documents, and all other forms of notarial acts to be executed by persons subject to military law.

"An assistant adjutant has no authority as such to administer oaths. (Dig. J. A. G. 1919, p. 135.)"

Paragraph 4, AR 250-5 states—"Hereafter no enlisted man shall be * * * permitted * * * to engage in any * * * performance in civil life * * * when the same shall interfere with the customary * * * engagement of local civilians in the respective * * * professions." Insuring compliance with the spirit of this prohibition, in so far as it applies to Army bands, neither the mere assertion that it is not intended to employ other musicians, nor the fact that the Army bands are to furnish music without emolument, should be accepted.

In this connection, the adjutant acting in the dual capacity of adjutant and as commanding officer of the band, should call on the secretary of the local musicians' union and establish an understanding with him. It has been the experience of the writer that, without exception, the local unions are willing to meet the military more than half way and agree that in cases where Army bands have been requested to furnish the music for a function or ceremony and when such request has been approved by the commanding officer of the post and forwarded to the union for its approval, such approval will be forthcoming. How-

ever, it should be thoroughly agreed that the post commander will not sanction such requests unless it can be shown that the function or ceremony is of a military or semi-military nature. With such an understanding there should be no cause for friction between the military and local civilians musicians. Of course when the troops participate in a parade or ceremony as a military force or unit, there is no question as to the use of the military band in connection therewith and as an integral part of the military formation. Objection has occasionally been raised against the use of a member of an Army band (Cornetist) to blow "taps" at the funeral of a civilian when such civilian is entitled to and has been furnished a firing squad by the military garrison, the contention being that, although the firing squad should be furnished, the musician could equally well be hired from among the members of the local union. This contention is incorrect as, in this case, the musician is an integral part of the military formation and should be furnished with each firing squad. An organization bugler is customarily furnished, but it occasionally happens that none is available at the time and therefore a member of the band is substituted.

Duties, Social. As mentioned above, the adjutant can do much to aid the social harmony and contentment of his command. He should be continually on the alert to arrange for social gatherings, whenever the situation requires it.

When post parties are being given in honor of a visiting dignitary, the representative civilians of the community should invariably be invited. This will go far toward making the civil community "Army-minded" and will be a great aid in obtaining their cooperation when needed.

In extending formal invitations outside of the military family personal likes and dislikes cannot be permitted to affect in any way the list of guests without voiding the basic reason for such invitations. Guests, other than those of individuals, are usually invited due to the position which they hold in the community and their personal traits should not be considered.

The adjutant should keep an up-to-date invitation list which includes the civilians mentioned above and, in addition, officers of the various government and state activities in the neighborhood.

If stationed near a naval base or station, a careful check of changes in naval commanders must be kept in order that official calls may be exchanged without delay. In this connection particular attention is called to Section II, AR 605-125, which prescribes visits of courtesy with our own or foreign naval vessels.

Organization of the Office. There is a very pronounced tendency to accumulate large office forces and assign individuals to certain types of work, thereby causing them to specialize. This results in the members of the office force learning their own jobs well but learning nothing else, with the result that, in case of sickness or furlough, the man taking over the work must undergo a course of

training prior to his satisfactory performance of the job. The ideal, of course, would be a force just sufficient to turn out all required work during office hours, each member being thoroughly familiar with all of the office routine. Unfortunately this ideal situation cannot be realized as long as enlisted men get sick, go absent without leave, desert and decide not to reenlist; hence there are always men in the office force who are new to the work.

Each organization in the regiment should detail one man for duty in regimental headquarters as a student clerk and thus establish a reservoir of qualified clerks and typists from which necessary replacements may be drawn as needed. Neither permanent nor student clerks should be allowed to specialize, but should be rotated on various duties within the office in order to insure that there will always be a man capable of handling any department of the work at any time. The amount of clerical labor may be materially cut down by the extensive use of rubber stamps and printed or mimeographed forms. Great stress should be laid on the War Department decimal filing system. This system is highly efficient if properly used but can be terribly "balled up" by a filing clerk who does not thoroughly understand his duties.

A typical office force would be:

- 1 Sergeant Major
- 1 Detail clerk
- 1 Filing clerk
- 2 Typists
- 1 Messenger
- 1 Orderly
- 1 Student clerk from each organization

Records. War Department requirements as to records to be kept change from time to time, but in general a record must be kept of everything happening in or passing through the office.

Complete files of all orders, memoranda, bulletins, circulars, details of all kinds and of all correspondence are essential and should be checked from time to time to verify the completeness thereof. The same applies to Army Regulations, Training Regulations, Technical Regulations and Training Manuals.

Signature. The subject of signatures is covered in AR 340-15. In general the adjutant signs "By order of the commanding officer" on all papers passing to a subordinate officer or unit immediately under his headquarters, and the commanding officer personally signs correspondence passing to other units, posts or to higher authority.

Personal Service. The adjutant can be of great assistance to the personnel of the command in the way of having available various kinds of general information and data, as railroad and ferry schedules, transportation costs to various points, sight-seeing trips of interest, etc. It is also a great advantage to have on hand a supply of blank checks and deposit slips on the local banks, as well as telegraph and radio forms.

Excerpts from An

Address of Secretary Dern

Delivered at Fort Monmouth
During the C P X

It is a great pleasure to meet you gentlemen in this way. While I was Governor, when I was confronted with a large audience, I used to start with a story, which may or may not have been an actual occurrence. Shortly after my inauguration, the warden of the state prison invited me to visit the institution in order that I might become familiar with my new duties. Upon arrival I found that he had assembled all the prisoners and invited me to make a speech. I was not accustomed to addressing audiences of that kind, and in my confusion I said, "Fellow convicts." Of course, they all gave me the laugh and I saw I had made a mistake. I started again, in my continued confusion I said, "Fellow democrats." Instead of laughing they all got sore. When you get men in prison you may do a lot of things to them but they will not stand for being called "Democrats." It was some satisfaction to me to find that there were no democrats in the institution, and so I said, "Anyhow, I am glad to see so many of you here."

So I say today,—I am glad to see so many of you here. I did not come to these exercises for the purpose of making a speech, but it is a pleasure to appear before you and say a few words. I came to the War Department knowing little about the Army and less than nothing about the officers of the Army. I say "less" because I had the ordinary civilian's viewpoint to the effect that Army officers are a different sort of animal from the rest of the human beings, and that they are bound by tradition which requires that everything be done in the same old way. After I became Secretary of War I had to unlearn and learn a lot and I am ready to bear testimony to the effect that the experience has been most gratifying. I am ready to indorse what Secretary Hurley said to me the day before inauguration: "I congratulate you upon coming into the finest department in the Government. I would rather be Secretary of War than any other member of the Cabinet. You are dealing with a group of honest men. Army men are not infallible but they always give you what they think is right and are not always trying to put something over on you." I have had enough experience in other activities to know that that is not the prevailing rule. I appreciate the pleasure of working with a group of men whose integrity is above question and who have the highest standard of honesty. I am proud to be associated with the officers of the Army and the Army as a whole.

I am also gratified to find that the Army is a progressive institution, that it is not bound by traditions and does not fail to try new things. In my opinion that is the only



way progress can be made. Anyone who adheres to his old and fixed beliefs never gets anywhere and soon lags behind the procession. You know the old story about a debate on the question of capital punishment; finally one of the speakers said, "Hanging was good enough for my father and it is good enough for me." That is the great block to progress. Unless we are willing to make adjustments in order to keep up with new developments we are not going to make any progress. Most of us get our opinions, our beliefs and our views from our surroundings, and the average citizen gets his opinions fairly well fixed and does not re-examine them. I have often heard men say: "I have never voted anything but a straight Republican ticket and will not vote anything but a Republican ticket." To my mind there is only one thing less disgraceful and that is "I never voted anything but a Democratic ticket." I think anyone who is so hide-bound in his opinions that he never re-examines them, never takes any steps to improve the conditions by which he is surrounded, never discards the false things he discovers, is a

**Army men are not infallible,
but they always give you
what they think is right.**

block in the path of progress. I find that the Army is progressive and studying new methods all the time. It is a great gratification to me to work with a group that is interested in research and improving all things that make for more efficiency and higher standards. That is the sort of organization we want. We want the Army of the United States, although it is small, to be second to none in efficiency. The very fact that we do have only a small army (the country does not want a large army) is the best reason why that army should be the most highly efficient that can be obtained. The C.P.X. that you have been holding here is a step in the direction of making a better and more efficient army. Some of the things are a little beyond my comprehension as a civilian, but judging from the enthusiasm manifested by all the officers and the interest that you have taken in it, I have no doubt of the real value of this maneuver.

I feel that we should endeavor to get the money from Congress to continue to have maneuvers of this kind and keep up this very excellent and useful work.

We have had in the past year a great many problems in the War Department. I have found that I not only had to keep busy learning my job but I had to work on other problems as I commenced to comprehend them. When I came in the Army, the War Department was in some distress. There was the pay cut; the Army took that graciously and I believe that it will soon be over. There were other things that gave us a good deal of concern—a reduced budget for the Army and other ill-advised measures. It took a lot of time and effort to convince those who were trying to reform us that they were on the wrong track. I feel that we have made substantial progress during the past year in a great many directions. I am sure that there is a great improvement in the morale of the Army, also in the attitude of the country as a whole toward the Army. The work that the Army has done with the Civilian Conservation Corps has sold the Army to the people of the United States. Everywhere I go I find words of highest praise for the Army, which has done so much, not only in the way of training the Army itself, but in the way of relieving unemployment and building up and saving young men who might otherwise have drifted into lives of idleness, if not something worse.

The Army has been suffering from the lack of adequate housing. When I was in Camp Dix yesterday I felt that

some of the buildings occupied by Army people today are a disgrace to the United States. If some corporation required its employees to live in some of those buildings, I am sure the Department of Labor would be hollering its head off at the terrible disgrace. Yet we have Army officers and soldiers living in quarters that are dangerous and should not be tolerated. During the past year we have succeeded in getting money enough to make some improvements. Much more is needed but we should be happy over what has been accomplished.

I have taken particular pride in the work that has been done by the Army Engineers in connection with some of the great projects which are being built with the Public Works Administration money. I had the pleasure of accompanying the President from Portland across the country. We inspected the great Bonneville Dam and the Fort Peck Dam, as well as work on the upper Mississippi. I am sure the President, as well as I, got a real thrill over the progress that has been made on the projects which are in charge of the Army Engineers. I never had a greater thrill than I did at Fort Peck, where a tremendous amount of work has been done in a short time. The Army has proved itself outstanding in promptly putting large numbers of men to work. We had our projects ready, labor was widely distributed and men were put to work on useful projects. We all take pride in that achievement.

The Army has gained considerable lustre for the work it has done for other departments, especially new agencies of the Government. I refer to the fact that the Civilian Conservation Corps work has been largely an Army project. The administration of the Public Works program has been helped materially by Army officers, also they have helped the Department of Agriculture in a great many of its emergency activities. It is greatly to the credit of the Army and the Army officers that they have responded so willingly to the Administration's program whenever they have been requested to help put new measures into effect. In all cases, the Army officers have shown that they are intelligent and efficient, and above all that they are honest and reliable. In that way the Army has sold itself to the public and is much more popular, I am sure, than it has been in a long time. That is one of the things we are all interested in and we want facts about the Army known.



WAR IN EUROPE in 1934 seems to me inevitable. It is foreshadowed by signs ominously similar to those which were clearly visible in Europe in 1913.—HENRY MORGENTHAU.



Will It Happen Again?

BY MAJOR LEONARD R. BOYD
Infantry

Part I

THE operations of one rifle company in a divisional engagement, lasting five full days, might appear to have but little influence on the final outcome of the battle. When it is considered that in most cases but eight rifle companies were in direct contact with the enemy on the entire division front, at the same time, it is apparent that one company does play an important part. Such a company may assist or hinder the advance of the battalion, and in turn, affect the success of the regiment, brigade and the entire division.

Company D, 16th Infantry, was distinctive in many respects, but particularly so in regard to its composition. The fourth rifle company of the First Battalion was formed by transferring groups from the three existing companies, and augmented by about 100 men from a replacement battalion formed at Syracuse, New York. This group of "spare parts" was banded together and christened Company D. The thirty-odd noncommissioned officers and men transferred from each of the three rifle companies were a varied group in respect to age, race, stature, temperament, physical fitness, and conduct. Many of this set of men were of the highest type of professional soldier—mature men who had elected the profession of arms prior to the entry of the United States into the World War. The leaven of these professional soldiers tended to change the heterogeneous assemblage of individuals into a closely-knit unit which gloried in professional disdain of danger

and sentiment. Over one-fourth of the company were of foreign birth and many had difficulty in speaking and understanding English. Others were of small stature, several had fallen arches and many were afflicted with periods of excess—usually soon after pay day. It should not be imagined that all of the men of Company D were below average in size or mentality, for replacements had reached the unit before July, 1918. One such group was composed of tall, strong youths from Montana and another similar group from Wisconsin had joined.

Early in its regimental life Company D was given the disparaging title of "The Foreign Legion." Strangely enough, this title was accepted by the men of the company, and the realization that they were considered as "black sheep" in the regiment seemed to give birth to an *esprit de corps* which remained throughout the combat service of "The Foreign Legion."

The majority of the men of Company D had been trained in France since July, 1917, and had served in the Bathlemont and Toul sectors and later in the Montdidier area. Here, they had been subjected to daily shell fire, had become familiar with combat discipline, and had experienced the depressing effects of seeing friends killed

An abstract idea such as insuring the safety of democracy, is no particular comfort to an individual undergoing the discomforts of an active campaign.



Not to eat them before dark.

and wounded. The training of the company officers had been largely that of participating in battalion, regimental and brigade maneuvers. Hence, after a year's training, they were thoroughly familiar with trench warfare routine and the formations of the company and its parts for defense and movement forward under the cover of a barrage. Little or no training had been allowed to fit squad, section and platoon leaders to utilize their men in attacks against individual machine guns. So we find Company D, after a year of training, only partially ready to

start on its first offensive mission.

The six months of intermittent trench warfare had thoroughly disillusioned the officers and men as to the glory of war. An abstract idea, such as insuring the safety of democracy, was no particular comfort to an individual who was undergoing the discomforts of active campaign. If the spirit of patriotism was present it was a weak, voiceless shadow, completely cowed by the idea that any show of sentiment was out of place in "The Foreign Legion."

Most of the men of Company D were young—excepting a few volunteers and some of the Regular Army personnel—and had become accustomed to hard work, broken periods of rest and irregular meals. They were probably in as fine physical condition for the work before them as could have been hoped for. Mentally, too, they were ready for combat. Their trench warfare experiences made each man feel that he was somewhat of a veteran, and as such, was anxious to appear disdainful of danger in the eyes of his comrades. For many tedious weeks these men had ducked on the approach of a German shell and had cursed the senders of these missiles. Few Germans had been seen and but very few shots had been fired by the company. So we find the company with an accumulation of hatred for the German soldier which was to be given an outlet in this, their first "jump-off."

PRELIMINARY MOVEMENTS

The 16th Infantry, after serving with the 1st Division in the Montdidier sector for ten weeks, was in "rest" area in the vicinity of Dammartin-en-Goele, northeast of Paris. During the night of July 14-15, heavy firing was heard in the direction of the front and rumors soon spread throughout the company that a break-through had taken place and that the Germans were again advancing on Paris. The normal routine was followed, in spite of these rumors, and at noon all who desired passes left the billets with orders to report in by "Taps" that night.

About 3:00 p. m. of the 15th orders were received from battalion headquarters to be prepared to entruck at five o'clock. The next two hours were spent in assembling equipment and clothing—much of which was being dried—and in making the packs of those who were absent on pass. The bedding rolls of the officers and the spare kits of the men were still en route by the animal-drawn sections of the trains, hence there had been no opportunity to re-equip any elements of the company.

By 5:00 o'clock all but a few of those on pass had returned and the company had been formed after a hot meal was served. In addition, each man was given two sandwiches and cautioned not to eat them before dark that night. The company entrucked and the column started off—towards the front again.

JULY 16-17

The truck column stopped about 2:00 a. m. and shortly thereafter a French officer, after talking in his native language for a considerable period of time, made known that we were to detruck. This was done and Company D was formed up on the side of the road and allowed to fall out, while the officers stumbled through the darkness in search of someone who knew where we were to go. A runner finally arrived with orders for the company to move "into those woods," pointing to a black mass extending across the horizon. A gap was dimly visible in the skyline and this proved to be a road, along which was found a mixed collection of companies of the 16th Infantry. Company D was pushed into this scene of confusion and halted while the officers tried to find battalion headquarters. After about an hour of shouting and stumbling the 1st Battalion, 16th Infantry, was formed and our march towards the front started. From that time until daylight the procedure consisted of a march of a few hundred yards—a halt, sometimes for only a minute but frequently long enough to allow most of the company to fall asleep—then moving forward and halting again. We reached a wooded hilltop shortly after daylight and went into bivouac.

During the early afternoon "officers' call" was sounded and the plans for the coming attack were discussed. The Regimental Machine-Gun Company, 16th Infantry, was attached to the battalion and the officers of that company, with the 1st Battalion personnel, made detailed plans for the advance over several miles of the enemy lines.

We found out, for the first time, that we were a part of a concentration of the entire 1st Division, and that we were situated near Pierrefonds, in the Villers-Cotterets forest. The 1st Division, in conjunction with the French Foreign Legion and the 2d American Division, was to participate



Had cursed the senders of these missiles.

in a surprise attack south of Soissons. The French troops were to be on our right and the 2d Division on the right of the Legion. We were informed that the four regiments of the 1st Division were to attack abreast, in order, from right to left: 18th Infantry; 16th Infantry; 26th Infantry; and 28th Infantry. The general direction of attack was to be slightly south of east and the zones of action were neatly drawn across the Paris-Soissons road, over the Paris-Soissons railroad, and past the Chateau Thierry-Soissons road. It looked to be a very simple maneuver—on the map.

All company commanders left by truck to go on reconnaissance at 5:30 p. m. The companies, led by the second in command, were ordered to march under cover of darkness to a new assembly position near Mortfontain.

The truck stopped about two miles west of Coevres-et-Valsery and the officers walked to French Division Headquarters which was located in the quarry west of Coevres. Here we waited until 11:00 p. m., when French guides appeared and were assigned to each officer. The guides could not speak English, and as I could speak but a few words of French, considerable difficulty was found in exchanging ideas.

The guides had made one trip to Division Headquarters before being detailed as such, and that trip had been made during the hours of daylight. They knew of no route to the front except by the main road through the town—and this road had been denied us for our march to the front. Off we went, down the steep hill into the darkened town—losing our way, retracing our steps, trying again and finally arriving in the battalion sector where we were to start our attack. So far the reconnaissance had confused rather than helped me in visualizing the terrain over which the company must be led during the following night. When daylight came all of the officers had arrived and we proceeded to the front line and tried to pick out some point on the terrain which might help us during the early stages of the attack. The front was a broad, gently rolling wheat field and beyond our immediate front we could see nothing on account of a morning mist. We were required to remain in the trenches as the French officers were apprehensive lest the presence of a large group of inquisitive officers might alarm the German outposts and result in artillery fire on their positions. When I left the front line I was quite dissatisfied with the opportunity afforded to actually see the positions we were to occupy—in fact I had only a general idea of where we were supposed to go. The other

officers, I found out, were no better off.

I went back to the company bivouac in the ravine west of Mortfontain, walking the entire distance in a drizzling rain, and found the company asleep and nothing done to prepare for the movement that afternoon. Fortunately the weather cleared shortly after my arrival and tents were struck and equipment laid out to dry. All men were urged to leave their valuables in tagged packages in care of the company clerk and most of them did this. The

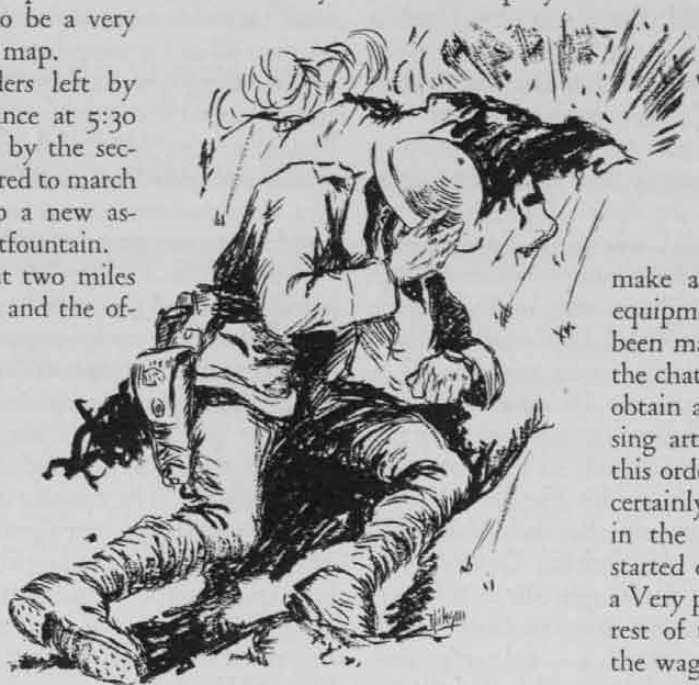
blanket-roll portion of the packs, which were to be left behind, were marked with the individual's name and number. In the midst of this preparation, orders were received from regimental headquarters to

make a complete check of combat equipment. A similar check had been made while we were resting in the chateau and I had been unable to obtain any replacement for the missing articles. As far as I could see, this order was of no help to us as we certainly could get no replacements in the few hours left before we started our march. I tried to obtain a Very pistol (mine was still with the rest of the company equipment on the wagons) but found no one with any, much less with any extra pistols.

Canteens were filled and extra ammunition issued. A hot meal was served and one meat and one jam sandwich issued to each man. Again they were cautioned to try and restrain their appetites until after we were out of sight of the kitchen.

The company was formed and the first sergeant called the roll and checked each man as he answered. There was a marked tenseness in the attitude of the men as they stood "at ease" after answering. Early in the roll call there was an answer of "here" which quavered a bit and most of the company smiled. Thereafter the answers were somewhat louder than necessary and called out with studied indifference. The last of the 218 rifles came to "order arms" and Company D, 16th Infantry, "The Foreign Legion," was ready to start on its first offensive fight.

The roads leading towards the front were jammed, so that Company D, in the battalion column, marched in column of twos and most of the time we were lucky to be on the road at all. Darkness came soon after the start and thunder clouds forming overhead soon blotted out even the helpful light of the stars. Then the thunder crashed and rain fell in torrents. The road was soon a sticky, yet slippery, quagmire; packs became wet and heavy; men stumbled and fell and arose covered with mud. Flashes of lightning showed a road filled from



The minute hand was nearly at 4:45

gutter to gutter with animal-drawn vehicles, motors, tanks and numerous columns of foot troops. There was loud shouting—drivers urging their teams onward—lost columns trying to find their organizations—men cursing when wagons or trucks lost their direction and edged into them—it was a scene of the wildest confusion. The rate of march was slow—perhaps a half-mile an hour—for each man had to hold to the equipment of the man ahead to keep from becoming separated in the inky night.

I was surprised when we halted at the quarry (French Division Headquarters) for the march had seemed endless. The men threw themselves on the rain-soaked ground, utterly exhausted. The combined French and American headquarters was also a scene of confusion—excited French officers trying to find American commanders and assign guides to them. The guides for Company D were finally found, and, as I had feared, two new guides had been sent. These guides, too, had never been through Coeuvres at night, except by way of the main road, and had but one helpful idea—they knew when their own front-line trenches were reached.

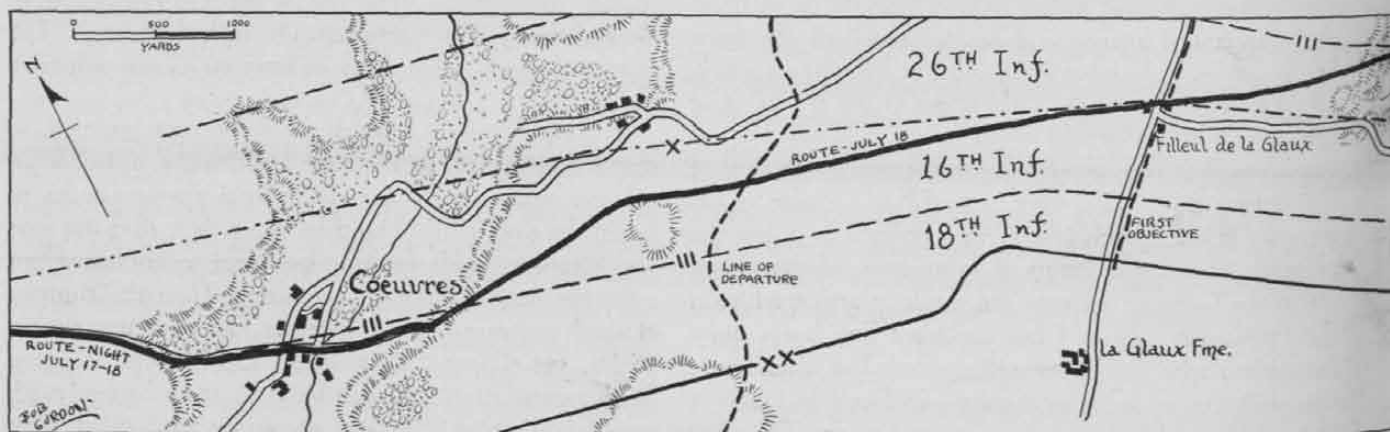
The route assigned to Company D led through the fields and down the steep slope into the town of Coeuvres and thence along an unimproved road to the front line. About one hundred yards from the French P.C. the path became so steep and slippery that each of the 218 men had to be helped down this decline. Darkness and rain added to the difficulty of this procedure, and over one hour was spent in moving a hundred yards to the front. The company thus formed in single file, and, holding to the man in front, each individual tried to keep his place in the formation as it wound down into the ruined town. Most of the men were muddy and all were wet and tired and disgusted with war and everyone connected with it.

The troubles of the company were not over by any means. Our guides led us through yards, in ruined houses and over fences. One of the company buglers, Abie Goldberg, remarked: "What d'hell do they think I am, a ——— alley cat?" Everyone near by laughed, partly because the company comedian had spoken and partly because of the aptness of the remark. Goldberg's remark spread along the column and soon there was a

reference to "alley cat," accompanied by much laughter, whenever a man climbed over any obstruction. Jest replaced grumbling and a few of the irrespressibles at the head of the column started a discordant song about the adventures of a young lady named "Lulu." The spirit of the company rose perceptibly when a man fell into the deep canal in the center of the town and was pulled out amid the derisive shouts of the company. Everyone within yelling distance felt called upon to think up a "wise-crack" at the expense of the shivering man, and there was laughter all along the column as the march was resumed.

The two guides having arrived at a decision as to the correct route, the company resumed the march up the road leading to the front. As we arrived at a crossroad the guides indicated that we were to go to the right. I felt sure that I had taken the left road on the night before and could not be convinced that the front line lay to our right. The guides had been lost many times before on our march and I had no confidence in their sense of direction. So I halted the company and took an officer and my orderly with me to reconnoiter the left road. Lightning flashes illuminated the road at intervals and I was certain that the guides were again wrong. Then a mounted military policeman accosted me and asked what I was doing, skulking. The ensuing conversation was lively, with the mounted man getting more and more suspicious of my actions and attitude. Our conversation must have been quite audible for a military police officer rode up and the entire explanation was repeated. By this time I was convinced that a mental kink had caused my loss of direction and I ended the argument by leading the officer to the halted company.

We took the right-hand road, much to the satisfaction of the two guides, and soon joined in a stream of men pushing up a narrow trail leading over the crest of the rise. There were four columns on this trail, three going towards the front, and one French column moving back. The stars were now aiding us in finding our way, and the eastern sky showed faint streaks of light. I could not understand the slow forward movement of the column until I reached the top and found a three-foot step-off, over which everyone was required to pass. The ground was slippery and the step too high for a man to get up



(in the dark) without some help. I ordered the first two men of Company D to remove their packs and to help up the remaining men of the company—but not to help up any but Company D men. In a few minutes the entire company was assembled on the trail. It must be admitted that the maneuver resulted in a rapid exchange of comments between myself and the officers of the blocked columns, but the principle of the objective overshadowed that of coöperation.

Once on the level plain, we moved to the left front and halted in a position which I estimated to be the one pointed out to me the previous morning. It was now light enough to see other columns moving into position and I realized that little time remained before the "jump-off." The company was formed in the "normal approach" formation, with two platoons in the forward wave and two in support. Each platoon, in turn, formed in two lines, so that the formation from front to rear was as follows: one section of each of the leading platoons—in line of squad columns—a distance of 75 yards—two sections of the leading units in line of squad columns—150 yards distance—and the two support platoons formed similarly to the assault platoons.

The company had not fully completed getting into formation when it became so light that I feared further movement might attract enemy fire and ordered everyone to remain in his present position and to correct the formations when we started the advance. Platoon leaders were assembled with me in a large shell-hole and final instructions were given for the attack.

One lieutenant was very obviously drunk. I had noted his good work during the advance and I was puzzled as to the source of his liquor. I found that his canteen had been filled with cognac and that most of it had been consumed within the last few minutes. The remainder of the liquor was wasted in the bottom of the shell-hole, but the problem of what to do with a gloriously drunk platoon leader was not solved. This officer was a good leader, and even on previous periods of intoxication had proved more efficient than some of the sober officers, yet I hesitated to entrust a platoon to him. On the other hand, I did not feel that I should send him to the rear and thus spare him from the hard work and danger ahead for the rest of us, so

I sent him back to his platoon and called his platoon sergeant to the shell-hole and gave him the complete instructions relative to the part his platoon was to play in the attack. One extenuating circumstance in the case of this officer was that he was convinced he would not survive the fight, and had given away all of his clothes and equipment, excepting that which he carried on him. My anxiety about him came to an end shortly after the "jump-off" when he was instantly killed. Up to that time his actions had been beyond criticism, and it was apparent to me that the nerve-racking incidents of the period just prior to our "jump-off" had served to sober him quickly.

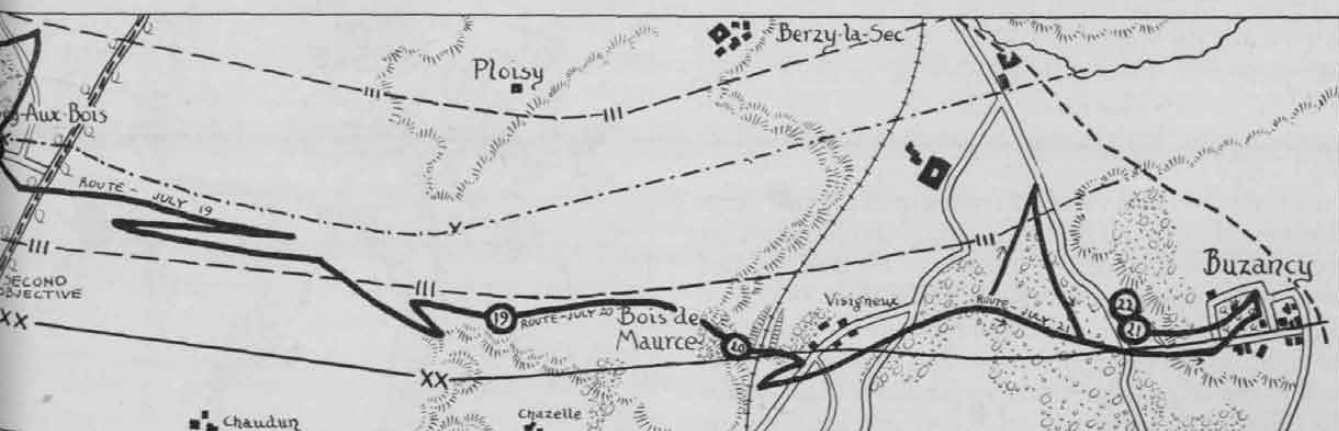
A long column of tanks approaching from the west of Coevres set up a loud clatter and the lights through the open doors could be seen from our position. I was constantly waiting for a German shell to pass overhead onto their position, but "zero" hour came nearer and nearer and all was quiet on the German side.

There was nothing left to do but wait for the hour of 4:45 to approach, and as I slid down into the headquarters shell-hole I became conscious, for the first time, that I was more tired than I had ever been before. My body and brain became numb and a wave of depression settled over me.

A red and green flare rose from the German line and in an instant answering flares arose all along the line. We knew what to expect and within a few seconds the German barrage fell around us. Almost five minutes to wait! The air seemed to be filled with German shells—the ground rocked and the din of the continuous explosion surged over us as a heavy wave. All the occupants of the headquarters shell-hole gravitated towards the deepest part and I believe it would have been physically impossible for any of us to have climbed out during those first few seconds.

One sergeant, with company headquarters, was so much more frightened than the rest of the group that someone laughed and the tenseness was broken.

A shell burst—clouds of dust rolled into the hole—the acrid powder fumes caused all of us to cough—someone nearby called for help—and "zero" hour was still some minutes away. With nothing to do but wait and brace ourselves against the sides of the shell-hole, the outlook



for the day was far from reassuring. The minute hand was nearly at 4:45, when a solitary American gun spoke, and was instantly followed by a thunder of noise which made the German barrage barely audible.

THE JUMP-OFF

This American barrage was the most inspiring incident in the five days' fighting. We, who had been depressed and were dreading the formation of the company under the German barrage, now jumped up and hurried into our places in the "approach march" formation. It was a great relief to have something to do; the officers to supervise the formation, and the men to get into their proper places. There was some delay in getting formed as many had been killed and wounded by the German barrage and several squads had to be reorganized while the German shells were still falling around us. The first-aid men and stretcher bearers were busy and many cries for help came from the wheat where the men had lain throughout the bombardment.

During the first part of the advance from the "jump-off" line, I was surprised to see every man smoking a cigarette. Then I heard someone call out, "Over the top with a Chesterfield," and remembered that the company had been issued a tobacco ration of five cigarettes the evening of the 17th and I had cautioned everyone to save one so that each man could start "over the top with a Chesterfield." This gave the men something to think about during the first few minutes, and the badinage which arose about the relative worth of several popular brands of cigarettes, all while we were under this barrage, proved that this idea was not without merit.

I could see that few German shells were falling beyond the French trenches which formed our line of departure, so I moved the company forward before the formation was perfect. It seemed incredible that so many shells could fall in such a formation without hitting most of the squad-columns, but the only casualties in the passage of this barrage zone were from machine-gun bullets. When I reached the French trench, I saw a gap in the line of exploding shells to our right. Whistle signals did not attract attention, so I jumped out in front of the line, pointed to the right oblique, and as the gap was fairly evident to all, the entire company changed direction 45 degrees to the right, passed through the gap, and changed direction back to the original line. My spirits rose—I had moved the company in a difficult maneuver, and had seen my first tactical maneuver in combat meet with success.



We captured several guns with their crews.

The mist from the heavy night rain and the smoke from the two barrages formed a low curtain around us, and made it difficult to see Company C, 16th Infantry, the left assault company, which had started out directly ahead of us. The companies to our flanks were also screened.

The advance to our first objective—the road connecting La Glaux Farm and Tilleul de la Glaux—was a succession of short movements, losing direction, catching up with Company C, taking casualties from scattered artillery and machine-gun fire, reforming units when a squad was cut up by a chance shell, capturing a few prisoners who had been missed by the front-line company—and for my part, keeping constant vigil to see that all Germans in our sector were not bayoneted. Men in the midst of grave personal danger take little account of life—especially the life of an enemy. Moreover, these men had seen their comrades fall and the urge to exterminate those responsible blotted out all reasoning power. At one time I halted the advance long enough to pass the word along the line that no German would be killed unless he was found shooting at us. Those who have first-hand knowledge of battlefield emotions will not regard this action as an unnecessary precaution.

I noticed that after several shells had blown up men of the company that there was a spirit of uneasiness dominant—men stopped at the whine of an approaching shell—ranks began to sag and with little to do besides move forward, the threat of the shells was uppermost in their minds.

To divert their minds, I decided to try some drill-field disciplinary measures. I moved from front to rear, and with vigorous whistle-blowing, and considerable yelling, dressed up the lines from right to left and from front to rear. Whenever a man strayed out of formation, I called to the platoon or section leader to dress his outfit, and it was not long before each man was paying more attention to keeping his place in the line than to the machine-gun



Whistle signals did not attract attention.

bullets, or the shell fire. I noticed considerable talk among the men, with puzzled glances in my direction and I overheard remarks, such as: "Must think we're on the drill field," and "What t'hell's eating him?" However, the company moved forward without faltering even when a shell landed on a forward squad-column composed of a lieutenant and his platoon headquarters. I sent one man to look after any who had not been killed outright, and the rest of the company moved by this mangled group still keeping dressed to the right.

We reached the first objective about 5:30 a. m. and found that Company C was in front of us, as ordered, but that a platoon of the 26th Infantry was between us and Company B, the right support company. During the halt, the company was reorganized and casualties checked. Two lieutenants had been killed, and the second in command, a captain who had reported for duty at the "jump-off" line, wounded. The platoon leaders, old and new, were instructed to combine squads which had been shot up and to see that each squad had a designated leader and second in command.

The advance was resumed at about 5:30 a. m. with Companies D and B leapfrogging the two assault companies. The smoke and mist still hung low and within a few hundred yards from the second "jump-off" line both flank companies were invisible. I sent out flank patrols to right and left and these were promptly swallowed up in the mist. I knew that one of the two units on our flanks was leaving the correct line of attack and I had to decide what to do. The common sense solution seemed to be to cover the gap, so I kept on, hoping to see one of the units shortly. A solitary figure caught up with us, during this phase of the attack, and proved to be Lieutenant Colonel J. M. Craig, of the 16th Infantry, who explained that he was "just looking around." I informed him of the situation and told him that I was out of contact with the 26th and the remainder of the 16th, but that I would keep on in the gap if he thought that was all right. He said it was a good idea and marched along with us, watched the company come under fire from a concealed machine gun, saw the leader of the assault platoon send out two combat patrols which finished off the Germans, and continued along with us for a short way. Then he remarked that he would be "running along" and moved off toward our right flank.

The sun soon dissipated the fog and the smoke from occasional shells did not hinder observation. Within a space of one or two minutes we emerged from dense fog to clear sunshine, and found that we were alone on the battlefield as far as we could see. A slight rise, about 500 yards to our rear, was barren of American troops. A similar rise, about 300 yards to our left, was equally devoid of olive-drab figures. To our front rose the steep banks of the far side of the Missy-aux-Bois Ravine, and the town of Missy was plainly visible to our right front.

I sent out two contact patrols, equipped with wigwag flags, to find adjoining units and report. They were instructed to go to the top of the rise and send a message



I went to the top of the hill, with two lieutenants.

back. The right flank patrol moved out about 500 yards and began to send a wigwag message. Two officers, and I, who had passed a course in visual signalling, were unable to make any sense of the message and as we waved back "repeat" a machine gun opened up on the company and cut short all signalling. The patrol on the left disappeared over the top of the rise and was next heard from, five days later, at the company kitchen.

The march was resumed in direction of the Missy Ravine in face of long-range machine-gun fire which soon became heavy enough to stop the advance. While searching the terrain with field glasses I noted a line of Germans crossing a slight rise 600 yards to our front. I called several of the sergeants to me and asked for their estimate of range in the exact manner prescribed in Bjornstad's *Small Problems for Infantry*. This took so much time that many of the Germans were out of sight before a range was agreed upon and the fire order given. A heavy volume of fire was directed on them, but much to our surprise, no Germans fell, their gait remained unhurried, and none of them even looked around. Firing ceased when the last German leisurely walked out of sight. Either the firing was too accurate and the range estimation faulty or else the first rifle target the men had met found them too excited to apply the principles of rifle marksmanship.

Soon after the advance was started, we captured several 150-mm. guns with their crews. They surrendered without resistance and again I was called upon to restrain the men of the company from killing all of them. I collected a group of 25 officers and men and sent them to the rear under the escort of two men who had minor wounds.

The forward line of the company reached a small rise on the west edge of the Missy Ravine and immediately drew very heavy machine-gun and 77-mm. fire on them. This was the most concentrated fire the company had received so far. The line stopped and the platoon leaders looked to me for instructions. I did not care to move the entire company through this fire so I motioned the assault line to withdraw to a position behind the crest of the rise. The rear elements were now under fire, as they had closed up on the forward line. The men wounded during this fire were carried to shelter and first-aid bandages were applied by men of the company. The medical men and litter bearers attached to Company D had never advanced beyond the "jump-off" line, and whatever first aid the

men received was either from German Medical Corps men or their own comrades. Firing had now ceased. I went to the top of the hill, with two lieutenants, to try to locate the enemy guns. We lifted our heads to look over at the opposite side of the Missy Ravine when several 77-mm. shells landed close enough to us to indicate that we were plainly visible to them. This reconnaissance party withdrew immediately.

As we reached the company position, a lieutenant from the 26th Infantry reported that he had a mixed platoon of men from the 26th and 28th Infantry in the woods just north of us, and requested that this unit be allowed to join us. He was instructed to bring his platoon into the already crowded position and to act as the fifth platoon. Soldiers began drifting in from right and left and rear. Among these were men from each of the four regiments of the division, also two Moroccans and one Marine. A section from the regimental Machine-Gun Company, 16th Infantry, caught up with us and was assigned a place in the company. All the others were assigned to the fifth platoon and seemed glad to rejoin some organization.

I decided that another effort should be made to cross the rise and instructed the leading platoons to deploy at tenpace intervals and move forward. Again they were met by machine-gun fire from Missy-aux-Bois and artillery fire from the east bank of the ravine. The entire hill shook under the impact of the shells and the leading line came back without command. I did not order them to repeat this movement inasmuch as I did not want to do it myself. I was convinced, by this time, that the machine guns around Missy must be put out before any further advance could be made. To this end I sent out a patrol of one squad under an experienced sergeant to find and clean out the machine guns near Missy-aux-Bois. A similar patrol was sent to our left with instructions to work across the ravine. These patrols drew fire as soon as they left the shelter of the hill. Then the fire was lifted from the patrols and directed to rise in our rear. Here we discovered four French tanks approaching us. They pushed on, under a hail of artillery fire, and pulled up under the shelter of the rise where we were halted. A French lieutenant stepped out of one tank and informed me, in excellent English, that the four tanks were at my disposal. If he had presented me with four pink elephants I could not have been at a greater loss as to their proper use. I asked him if he could knock out the 77's across the ravine and he replied that although he had been shot out of two tanks during the morning he would try it if I said so.

We went to the crest of the hill and were cautiously scanning the ravine for routes the tanks might take when one of the tanks opened fire with a 3-pounder at a group of our men who were observing the tanks about 100 yards away. Several were hit and wounded men screamed. By this time the French lieutenant was running at top speed toward the tank and calling to the gunner to cease firing. But the tank fired again and more men fell. The lieutenant stopped, picked up a rock, and began to pound on

the door. The rest of the company had taken cover by this time, not knowing what was happening. The gunner finally opened the door and orated and gesticulated to some length. Then both came over to the spot where the wounded men were lying. I instructed the lieutenant to notify the other tanks that we were not Germans and to waste no time in doing so. Meanwhile the five men who had been hit were given first aid and one machine gunner who had received a direct hit was covered with a raincoat. The lieutenant returned and with the tank gunner explained that the man had become confused, due to fatigue and excitement, and seeing a machine gun being set up, suddenly thought we were Germans and fired. The gunner himself was horrified at the results of his actions and the lieutenant was profuse in his apologies for the mistake. He wanted to start out at once across the ravine and requested a platoon to accompany his tanks. I sent the senior lieutenant and his platoon with the group and they passed through the woods to the left of the rise and disappeared in the valley.

The tanks and accompanying platoon moved straight across the ravine until sheltered from the 77-mm. guns on the crest, and then moved to the right toward the town of Missy. The tanks were heavily shelled during the advance, but none were hit. The platoon suffered casualties from this fire and from machine guns on the lower slope of the east side of the ravine. The action of the tanks is indicated by a statement of one of the men of the right flank patrol: "The tank came close to where McFaden and I were holding out, and there was a French lieutenant on the ground walking beside the tank. McFaden and he were talking, as this French lieutenant could speak a little English. I overheard him tell McFaden the number of miles we had covered and the number of prisoners taken, and praising the work of the Americans. Then as we were walking along with this tank, to the right of the hill where the company was halted, we could see some men trying to pass through the Missy ravine and were being mowed down by machine-gun fire, fired by two machine guns which were set up and concealed in a dugout made in solid rock at the edge of this hill and in an opening for direct fire through part of the ravine. Everyone was able to see how this gun was mowing down our troops. The French lieutenant commanded his tank to the place where this machine gun was and opened fire with at least a dozen shells directly into the dugout entrance. The company remained still at the top of the hill edge while the tank was firing. I remember that after the tank crew had put the machine gun out of action the accompanying platoon moved forward through the ravine, and there were three tanks there in all. The tanks stopped and opened their doors and the crews came out to greet us. All the tanks were supplied with milk cans full of red wine. After having several good drinks of this wine and filling our canteens, the platoon again moved forward in high spirits."

(To be continued)

Offsetting the Angular Travel Director

By LIEUTENANT PARMER W. EDWARDS, C.A.C.

THE parallax feature of the linear speed type of antiaircraft director has become so popular, from a tactical standpoint, that it would seem desirable to offset all our directors. The methods of applying lateral and vertical parallax corrections in the linear speed instrument, while ingenious, are relatively simple, cheap, and accurate. Unfortunately, the principle of angular travel and the design of our present angular travel instruments make it appear impossible to obtain a method of parallax correction embracing cheapness, simplicity, and theoretical accuracy. However, it is believed that the following method can be applied to future angular travel instruments with a simplicity and cheapness comparable to the other mechanisms of the instrument, and that its deviation from theoretical accuracy will be no more serious than the deviations already accepted in our T8E3.

Referring to the figure below, we know that should we fire our guns at point T', as determined by the director,

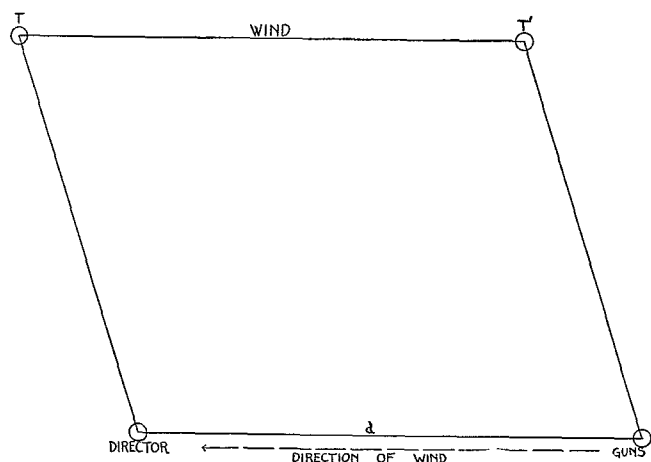


Fig. 1

without corrections for offset, we would hit some such point as T. Now let us forget our previous notions of offset in terms of parallactic and range difference errors, and assume that our guns were properly laid to hit T', but due to a wind, our projectile was blown over to T. We have but to correct for this imaginary wind blowing from guns to director and we will have solved our offset problem approximately, but with sufficient accuracy. The azimuth of this fictitious wind is known, also that of the line gun-director, therefore the distance the wind must blow the projectile while it is in flight is the distance, "d," between director and guns. Knowing "d," the time of flight, and the displacement effect of wind upon the projectile used, the speed of the wind for which we are going to correct can be determined.

It has been determined from ballistic data that a good average of the displacement effect of wind upon our present AA projectile is that a 10 mile per hour wind will

displace the projectile from its initial direction at a rate of 2.4 yards per second in the direction of the wind. Applying this method to the M1A1, in which we set wind speeds in feet per second, 2.03 foot seconds of wind will displace the projectile at the rate of one foot-second. Therefore, the speed of an imaginary wind which will displace the projectile a distance "d" during the time of flight can be obtained from the formula:

$$\text{Speed of wind} = \frac{2.03 \times d}{tp} \text{ or roughly } S = \frac{2d}{tp}$$

Where S is in foot-seconds and "d" is in feet.

If there was no real wind, we could introduce into the instrument the azimuth and speed of this imaginary wind and the instrument would correct all elements of data for the offset with the same accuracy that it now corrects for wind, which is far more accurate than our meteorological information. Or we could, with a simple mechanical application of the "tp" factor, introduce azimuth and the distance, "d," and let the instrument continuously solve the problem. However, with real wind, the problem becomes one of solving for the resultant of two vectors representing the real and the imaginary wind. This can be done automatically by the instrument with the addition of several computing mechanisms and reasonable modifications of a few of the existing mechanisms. The purpose of this article is not to describe a redesign of the instrument, but to suggest a practical method of firing our present M1A1 from a limited offset position.

For an immediate practical application of the method to the M1A1, it will be necessary to build a "widget." To review, the problem to be solved by the "widget" is the determination of the resultant of the real and imaginary wind vectors that the direction and the magnitude of the resultant may be periodically set into the instrument as wind azimuth and wind speed. Certain limitations are unfortunately imposed upon the solution by the constants of the instrument as it now stands.

The maximum wind speed accommodated for by the instrument is sixty foot seconds. Assuming no real wind and a fictitious wind of maximum allowable velocity, one set of limiting conditions would be a maximum offset of 100 yards and a minimum time of flight of 10 seconds ($S = \frac{2d}{tp}$). With the above conditions, a time of flight of less than 10 seconds would prevent the accurate solution of the problem, however, we tactically hope to engage a target before it is within a range equivalent to 10 seconds time of flight, and by the time it has reached this arbitrarily chosen minimum range, good spotting results should have been obtained, making it comparatively easy to keep the bursts near the target even though parallax errors creep in slowly. Being limited to so little offset distance is more serious and precludes entire satisfaction

in the method with the present instrument. Extending the minimum time of flight requirements would allow the director to be placed farther from the guns. Also, since a real wind is usually present, the placing of the director down wind from the guns assures that the resultant wind would be smaller than its imaginary component and would allow the maximum offset distance, as determined by the chosen minimum time of flight and the condition of no real wind, to be exceeded. This method, however, would be uncertain.

placed anywhere on the board and rigidly fixed. It is also graduated in foot seconds of wind velocity to the same scale as arm A, but inscribed in times of flight. Construction of this scale is very simple, being obtained from the formula $S = \frac{2d}{t^2}$, and could be quickly drawn in the field upon determination of "d," or several scales, even B arms, could be constructed for 50 foot intervals of offset distance. A convenient scale is 1" = 10 f.s. if using a maximum time of flight of 21 seconds, or 1" = 5 f.s. if using a maximum of 30 seconds.

To orient, set arm A at the azimuth of the real wind. Using the scale on A, mark a point at the division corresponding to the wind velocity in foot seconds as obtained from the meteorological message. A line from the pivot of A to this point would represent the real wind vector. Place the index of the mil protractor on the point and orient it. Mark a point at the azimuth on the gun-director line. Anchor the index of the B arm on the first point, align the fiducial edge through the two-points, and fasten the arm to the board. This arm represents the fictitious wind vector, the distance from its index to any particular time of flight representing the velocity of the imaginary wind required to blow the projectile from director to guns during that time of flight.

If the fiducial edge of arm A be placed on the particular time division on B, it will represent the resultant vector. Operation, therefore, only requires that No. 5 at the instrument call out the time of flight (when it changes appreciably), and that the operator of the "widget" set arm A to that of flight on B and call out the wind azimuth, as indicated on the azimuth circle by A, and the wind speed, as read from the scale on A. These readings of wind azimuth and speed are set into the instrument by No. 7. When the time of flight is large, it will be sufficiently accurate for No. 5 to call off the time of flight in whole seconds. But when the time of flight is relatively small (15-10 seconds) he should transmit it to the nearest half second or even to the nearest two-tenths of a second.

AUTHOR'S NOTE: Collaboration with 1st Lt. L. W. Bartlett, CAC., in the origination of this idea is acknowledged.

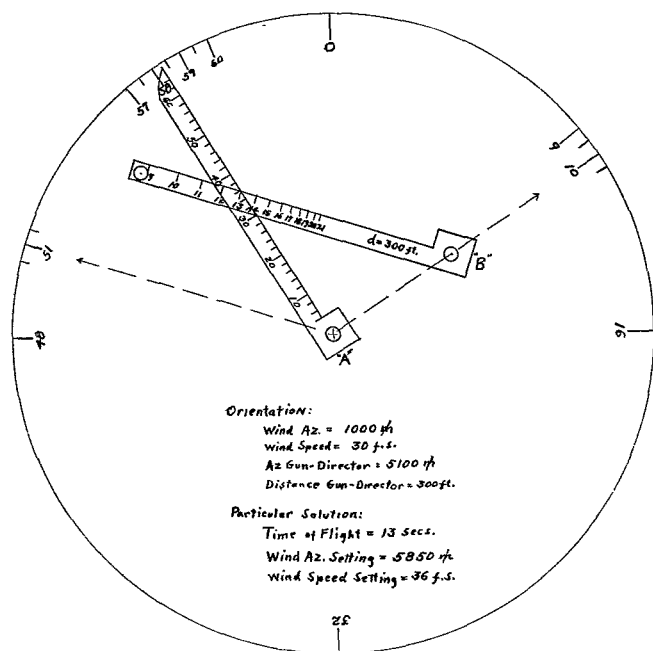


Fig. 2

Referring to figure 2, the "widget" consists of a fixed azimuth circle, two xylonite arms A and B, and a mil protractor. The azimuth circle has 50 mil divisions (it is believed that greater accuracy is not warranted). Arm A has a fixed point at the center of the azimuth circle and is graduated in foot-seconds. Arm B is capable of being



THE LIMITATION OF ARMAMENT CONFERENCES have dealt in national prestige far more than they have in either economy or national defense. In theory, all nations have equal sovereign rights and are entitled to adequate national defense. To impose inferiority in either, by agreement or otherwise, is subversive of the doctrine of complete sovereignty, which subversion cannot be explained away by a laudable though specious alibi of economy. There are enough reasons for nations to quarrel among themselves without quarreling unnecessarily about armament ratios.—COMMANDER E. S. R. BRANDT, U. S. NAVY.

NEWS AND COMMENT

Support Your Journal

"We are nearly overcome from the toil of dropping buckets into empty wells and growing old in drawing nothing up."—COWPER.

IN the good old ante-bellum days, when all routine work at the average army post was finished by high noon and officers had plenty of leisure to devote to certain well known forms of recreation, and even do a limited amount of professional reading to enhance their value to the service and broaden their scope of professional knowledge, it was expected—yea almost required—that all officers subscribe to the JOURNAL of the U. S. Artillery. In those days it was considered that no officer could be proficient in Coast Artillery tactics and technique unless the JOURNAL found its way regularly to his den. All regular officers subscribed as a matter of course. All newly commissioned officers (how well do I remember) were given to understand that a subscription to the JOURNAL was as much a part of their military duties and obligations as it was to do any of the other numerous things required by custom. Of course there were a few hold-outs—soreheads—who insisted upon displaying their individuality, their contempt and disregard for established customs, but for the most part we had signed on the dotted line. The junior officers may have been financially embarrassed—a normal and expected condition for all army officers—nevertheless they found it no hardship to forego some useless and needless personal extravagance if necessary, to find the wherewithal to meet their obligations and to give a tangible expression of their allegiance to the Corps.

This was the condition that existed in the good old days but all things changeth. Came the war—an influx of officer personnel which could not be rapidly assimilated in the digestive apparatus. A subscription to the JOURNAL no longer was regarded as a requisite for an officer to be in good standing. Then strange theories began to develop. New thought, freedom, personal liberty—came into vogue. Loyalty became a cheap word; *esprit de corps* went begging. Those who professed allegiance to a cause were regarded as throwbacks from a by-gone period.

"Well what of it?" some of our all too numerous present-day hold-outs may inquire. Just this: loyalty, like a two-edged sword, cuts going and coming. You expect the Corps to support you, why should not you support the Corps. If you are not bearing up against the collar hard enough to pull your full share of the load then you are soldiering on the job and riding on the backs of others. An officer cannot lead a life apart. He is a member of a large family and he should be willing to do his part of all

the work that must be done. Either he is a worker or a drone. The COAST ARTILLERY JOURNAL does not belong to any officer or to any group of officers. It is the official organ of the Coast Artillery Corps, the mouthpiece of the Chief of Coast Artillery, the bearer of the Coast Artillery standard and the symbol of progress emblazoned on its escutcheon.

A copy of this editorial and a subscription blank will be sent to each non-subscribing Coast Artilleryman. The number of blanks returned with a signature on the dotted line will be accepted as a criterion of the attitude of the non-subscribing members toward the arm of the service in which they hold a commission. Because of this commission they are able to provide the necessities of life (if not the luxuries) for themselves and family. In this connection we are tempted to say something about "gratitude" but we will let that pass.

A subscription costs only three depreciated dollars, twenty-five cents per month, less than one cent per day. Need we carry the analogy further?—two packages of cigarettes, one movie ticket per month, and so on *ad infinitum*. Experience has demonstrated, times without number, that an officer can always find a place in his budget to do those things that he wants to do; therefore, it cannot be successfully argued that failure to subscribe is due to financial inability. The only other reasonable assumption is that the non-subscribers are in that status because they want to be. How easy it would be to change that status and enjoy the satisfaction that comes from the knowledge of a duty performed. We blush when we have to admit that a certain percentage of the officer personnel are withholding their support. Family secrets should be locked in the closet, but this one needs an occasional airing.

We are not writing this for the benefit of the subscribers, for them we have only praise and commendation, but we are going to ask them to become disciples and, like John the Baptist, go about preaching the gospel. To subscribe to the JOURNAL (please note that we purposely used the words "subscribe to" in place of the word "read") is *prima facie* evidence of 100% loyalty, zeal and professional interest. Many otherwise (special emphasis on otherwise) good Coast Artillerymen may feel their sensitive toes stepped on by this diatribe intended to solicit support. If they want to defend their position the JOURNAL will welcome and gladly publish all communications fit to print. But why all the argument when it would be so much simpler and easier for the hold-outs to change their status and become, like Cæsar's second wife, "above suspicion."

The Retired Officers' Association

THE RETIRED OFFICERS' ASSOCIATION, with headquarters in Los Angeles, California, has broadcast to all of the uniformed services an appeal for financial assistance. No more worthy cause (from the standpoint of the Army officer) has ever come to our attention. This organization, whose officers serve without remuneration, is conducting an active campaign to point out the fallacy of the arguments advanced by members of Congress who are assiduously striving for ways and means to curtail the pay of the retired officer and enlisted man. Not an inconsequential part of the officers pay is his equity in the retired pay which he expects to receive upon the completion of his active duty. To be faced with the possibility of having this pay materially reduced is nothing short of calamitous. There is a pronounced tendency on the part of certain members of the legislative body to reduce the allowances for retirement, or as an alternative, to set up machinery for financing all retired pay through monthly allotments while on the active list. It is necessary to educate the people to an appreciation of the injustice resulting from either of these proposals. To do this requires a very considerable amount of organization and planning.

The Retired Officers' Association is not only fighting its own battle but the battle of every officer now in the uniformed services. A contribution to this organization is "bread upon the waters."

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What Is Wrong?

IS IT TIME TO OVERHAUL THE SYSTEM FOR THE AWARD OF TROPHIES?

SINCE the appearance of the September-October issue of the JOURNAL, which carried an announcement of the regimental trophy awarded by the Association, several letters have reached the Secretary indicating that in the opinion of the authors something is wrong with the basis of the award. Just what that something is no one seems to know. When conditions are unsatisfactory it is the duty and responsibility of those in authority to find out what is wrong and what can or should be done to better them. This is properly the function of the Executive Council. Much study and thought has been given to the problem. It is very difficult to draw up a formula that can be applied with justice to all the varying conditions which obtain in the Reserve Corps. There are many different points of view and so many special situations to be considered that no one system can be made to fit all contingencies. The blanket cannot be stretched to cover the entire family; however, the Executive Council is anxious to obtain the reaction of those who are in the closest touch with Reserve Corps activities and consequently in the best position to make constructive criticisms and recommendations. With this idea in mind we hope that all those who are at loggerheads with the present system will reduce their ideas to writing and send them to the Secretary for consideration of the Executive Council.

Perhaps out of this will evolve a better system than the one now prescribed. We have already received a number of letters on this subject and we take the liberty of reproducing extracts from two of them. May we hear from others? All ideas and recommendations gratefully received. One officer now on duty as executive writes as follows:

It is felt that an organized effort to win the trophy would be at the expense of training, rather than to its profit, because:

1. The award being entirely upon extension course work the emphasis is upon quantity, rather than quality;
2. The whole extension course plan is designed to give an officer progressive training to fit him for increased rank, and should, therefore, be kept in step with his progress in rank;
3. Any effort to pile up large records of extension course work will result in:
 - a. Sacrifice of valuable training to be derived from practical work in the case of units situated to get such training;
 - b. Hasty and ill-absorbed completion of courses, not with a view to sound individual training, but simply for window dressing—to set up a statistical record;
 - c. The completion of courses by young officers before the time that other training and experience had prepared them to absorb the courses properly, and long before the completion of such courses could have any significance in the matter of promotion;
 - d. The danger that the regiment would go stale on extension work and the whole Reserve idea, and find itself, next year, with a lot of undigested courses stacked away and nowhere to go to get rid of the consequent intellectual bellyache—(pardon, please, the rough words of an old soldier).

Now, I think that is sound.

It seems to me that, considering the variety of unit situations, and the idea of sound and progressive training, that the trophy should be discarded. I would replace it with an "E" to be worn—or a T E (training excellence) by all units which accomplished in the training year 90% of the proper ratio (between extension course work and service in grade for promotion). Any bright sixth-grader can figure that. And the scheme would fit the whole standard of training, properly absorbed, without risking other and valuable forms of training.

Another officer commanding a Coast Artillery Reserve regiment states:

I believe I am right in assuming that the motive underlying the awarding of the trophy is not solely to stimulate a competitive interest among the Regiments, but is primarily to encourage Reserve Officers to prepare for and secure their Certificate of Capacity for their next higher grade. I believe (if this is correct) that in computing the total hours, those officers who have completed the work necessary for and have secured their Certificate prior to the opening of the school year, should be eliminated from the total number of officers; hence, only the remaining number of officers would be used as a factor in determining the regimental standing. I find it is true in my regiment, and I am sure it must be true in others that a great many officers have completed, not only the courses necessary for promotion, but also for the next higher grade and have

reached a point where they cannot continue at the rate they have been going as their credits will be outlawed before they are in line for their second succeeding promotion.

Very few things are so near perfection that they cannot be improved. At present the award of the trophy is predicated upon the following assumptions:

a. It is applicable to all Reserve units regardless of the size, location or concentration.

b. The average performance of all members is more important than individual performance, therefore all must pull a part of the load.

c. It is simple in its operation and comparatively easy to obtain reliable statistical data.

d. It does not give the urban unit, where a number of officers are concentrated, any advantage over the unit whose personnel is widely scattered and, therefore, unable to assemble for conferences, group schools, etc.

When a more just and equitable system for determining the winner can be devised the Executive Council of the Association will be more than willing to adopt it. Perhaps it is time for a new deal. Will the Brain Trusters of the Coast Artillery Corps come to the front and tell us what is wrong and what corrective measures should be applied?

1 1 1

A Selected List of Books for Your Military Library

NOT so long ago the JOURNAL carried a short editorial requesting officers to submit their ideas and recommendations for enhancing the value of the JOURNAL to make it of greater benefit to all Coast Artillerymen. In response to this appeal there has recently come to the editorial desk a suggestion that we believe merits careful consideration. This suggestion is that the JOURNAL prepare a list of selected military books, in order that members of the Reserve and National Guard components may have an authoritative idea as to the reference books which should be found on their shelves. The author of this suggestion also recommended that the JOURNAL furnish these books on a deferred payment plan, the purchaser to make a down payment and the balance in monthly installments.

Notwithstanding the fact that the JOURNAL frequently carries a list of selected military books we think so highly of the plan suggested that we are willing to cooperate with anyone who desires to provide themselves with a Coast Artillery reference library. As a starter in this direction we recommend the following books for special consideration:

Gunners' Instruction Pamphlets, I to XII inclusive

Coast Artillery\$ 6.00

Outlines of the World's Military History,

Mitchell 5.00

Steele's American Campaign—2 Vols. 10.00

History of the United States Army, Ganoë... 5.00

Inevitable War, <i>Stockton</i>	4.87
Officer's Guide	2.75
Reserve Officer's Examiner	1.50
Military Policies of the United States, <i>Upton</i> .....	.75

Many other books might be added to this list, but we believe the foregoing to contain the best and most authoritative sources of military information especially pertaining to the Coast Artillery Corps and also standard works of reference which will give the reader an excellent insight into the background of our military establishment. Special discount will be allowed from the prices quoted above.

1 1 1

Prayer of an Army Brat

Dear God above I humble pray
Listen to my plea this day.
True my pride is far too strong,
True my conduct often wrong,
True my devotion often fails,
My litany is fiction tales.
But God, you made me what I am,
A wayward child of Uncle Sam.
"They say" a lot, but spite of that,
I'm thankful I'm an Army Brat.

My prayer is not for dull salvation,
Nor understanding of creation,
Nor hope of riches, worldly wealth,
Nor yet for superhuman health.
I ask not for a longer life
Nor refuge from this earthly strife.
I plead no right to soft content;
The things I plead these things prevent.
I want the man who marries me
To be clad neatly in O.D.

I want some Second Louie, Lord,
To shyly speak the precious word.
I'll gladly share his small income
And some poor station's smallest home;
I'll share his wanderings evermore
From post to post and foreign shore.
My calling card shall bear his name
I'll help him in his Army game.
So God, I pray you grant to me
A man clad neatly in O.D.

Oh God, if I can only live
As Army women live and give.
I'll give the best of all my years
To heartaches and to bitter tears.
I'll ask no place for mine alone
Nor covet things I may not own.
His petty trials I'll gladly share
His Army Brats I'll gladly bear.
All God, I ask of you and life
Is let me be an Army wife.

JULIE JANE WILLIAMS (14)

COAST ARTILLERY BOARD NOTES

Any individual, whether or not he is a member of the service, is invited to submit constructive suggestions relating to problems under study by the Coast Artillery Board, or to present any new problems that properly may be considered by the Board. Communications should be addressed to the President, Coast Artillery Board, Fort Monroe, Virginia.

THE COAST ARTILLERY BOARD

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SECTION I

Projects Completed Since the Last Issue of the Journal

PROJECT No. 915—TEST OF NH POWDER CHARGES (D. P. LOT X-3701) FOR 12 INCH MORTARS M1890-08.—Firing tests of NH powder for 12 inch mortars were made by the Board in 1932. At that time there were indications that, while the ballistic characteristics of the powder were satisfactory, blast effect was extraordinarily severe. Final tests were delayed by the economy program until the current training year when two practices were held, one by the Virginia National Guard and one by a battery of the 52d Coast Artillery. In neither case were the blast effects more noticeable than those from pyro powder. Therefore, the acceptance of the powder for service use was recommended.

PROJECT No. 973—TEST OF LACQUERS AND VARNISHES FOR USE AS RUST PREVENTIVES.—At the end of a test period of about six months, each of the lacquers or varnishes submitted for test had failed in one or more respects. None had furnished a completely satisfactory rust preventive coating, also most of them had become unsightly in appearance. To add to the defects, it was found that the more durable of the covering materials were correspondingly difficult to remove. However, it seemed that for such items as breech surfaces, polished brass operating handles and the like, there was some advantage to the use of lacquers and varnishes as a preservative against corrosion, because inspection was easier and appearance better than when slushing oil was used. Therefore the Board recommended that two of the most promising materials be given a second test and that the Chief of Ordnance be requested, in the meantime, to continue the search for a varnish or lacquer that would inhibit rust on steel, would not tarnish brass, and would be both easy to apply and to remove.

PROJECT No. 989—AZIMUTH AND ELEVATION CHECKING DEVICES FOR 155-MM GUNS.—The reliability of these devices depends upon the assumption that the gun on which they are installed will remain oriented and that

the carriage will not change in level during the firing. The first tests were conducted at a concrete emplacement where the basic assumption seemed justifiable. Subsequent tests with a gun emplaced on sand, showed that the recoil of the gun displaced the trails enough to make both azimuth and elevation checking devices too inaccurate for service use. Accordingly, the Board did not recommend adoption of the devices.

PROJECT No. 1002—REVISION OF TABLES OF ORGANIZATION—SPECIFICATIONS AND INDEX FOR OCCUPATIONAL SPECIALISTS.—This project is closely related to MR 1-3, Classification of Enlisted Men. The Board listed the requirements for some 70 specialists used in the Coast Artillery. If battery commanders in the next war get recruits as good as specified, the training problem will be easily solved.

PROJECT No. 1003—DRILL CARTRIDGES FOR 3 INCH ANTI-AIRCRAFT GUNS.—After a workout by the husky loaders drawn from the United States Military Academy Cadets, the drill cartridges with spring-cushioned bases were found to give little longer life than the standard drill cartridge. The Board recommended that efforts to secure a more durable drill cartridge be continued.

PROJECT No. 1005—IMPROVED HOWLERS FOR TIME INTERVAL APPARATUS.—The howlers for giving time interval signals at the gun positions with the time interval apparatus for mobile artillery have not proven sufficiently rugged to withstand the concussion of gun fire. A horn was improvised locally in an effort to reduce the air blast against the diaphragm. This horn, though not entirely successful, seemed to indicate that by further experiment a suitable howler could be devised. The Coast Artillery Board recommended that none of the howlers so far tested be adopted as standard and that further development work be continued.

PROJECT No. 1021—SPONGE STAVES, 155-MM GUNS.—Often seemingly inconsequential items, such as this one, require more study and experiment than is usually realized. In the present instance, the type of sponge and stave has been the subject of two other Coast Artillery Board projects and has also been studied by the Field

Artillery Board and Ordnance Department. The assembled length of the staves furnished for test was insufficient for properly sponging the bore. The Coast Artillery Board recommended that bore sponge, rammer and chamber sponge heads be made separate and that enough staves of sufficient length be furnished to permit sponging the bore from the breech end.

PROJECT NO. 1009—LAYTEX-INSULATED WIRE.—After completion of the test described in the previous issue of the COAST ARTILLERY JOURNAL it was recommended that the Laytex wire be not adopted as standard. The Laytex insulation apparently failed to stand exposure to field conditions as well as the standard field wire and in addition lacked sufficient resistance to mechanical injuries.

PROJECT NO. 1013—TRAINING MEMORANDUM, INSTRUCTIONS FOR COAST ARTILLERY TARGET PRACTICES, CALENDAR YEAR 1935.—This pamphlet, if approved, will prescribe the target practice procedure for the calendar year 1935. The salient changes from previous target practice procedure are outlined elsewhere in this issue of the JOURNAL.

PROJECT NO. 1014—UNIVERSAL GAS MASKS WITH SPRING HEAD HARNESS.—The universal face piece which previously had been tested by the Coast Artillery Board was found to be well adapted to at least 95% of the physiognomies usually encountered. Inasmuch as army regulations do not authorize discharge of those soldiers who are "wild shots" in facial design, special gas masks will be needed in addition to the "universal" size. The present gas mask differs from the previous model in that the elastic material in the head harness has been replaced by cloth-covered coil springs. The spring head harness seems fully as good as the elastic kind and promises greater durability. Approval for service use was therefore recommended.

PROJECT NO. 1020—CIRCUIT BREAKER CONTACT, SEACOAST GUNS.—This device is a rather simple mechanism designed to avoid the possibility of electrically firing a seacoast gun before the breech block is fully rotated and locked. The electrical firing circuit now in use is completed by a contact that closes just before the block is fully rotated. With the improved mechanism the contacts are placed so that they are closed by the action of the locking bar sliding into its notch. The test shows that the device needs some further refinement in design, but it is considered sufficiently satisfactory to warrant a recommendation for installation on guns to which applicable.

SECTION II

Projects Under Consideration

PROJECT NO. 929—EXPERIMENTAL FIELD CHRONOGRAPH (JACKSON).—There is no immediate prospect of completing the development work on this item in the near future. The Chief of Coast Artillery has therefore authorized the placing of this project in the suspended file until further notice.

PROJECT NO. 953—RADIO CONTROLLED HIGH SPEED

TARGET.—The Coast Artillery Board speed boat has undergone a rather complete overhaul since its first water trials, receiving a coat of anti-fouling paint, a copper exhaust pipe and a bronze propeller shaft. All these items were needed to assist the craft in overcoming the changed conditions between Lake Michigan and Hampton Roads. The radio apparatus is well under way and it is expected that tests at sea will be started soon.

PROJECT NO. 964—TEST OF RUBBER JACKETED SUBMARINE MINE CABLE.—The test of this material, made in the local laboratory, indicates that a suitable product has been found. Some of the cable has been shipped to overseas garrisons for service test. Unless the unexpected happens, there will be little or nothing to report on this project until receipt of the conclusions from the two-year test which has been directed to be carried out at certain posts.

PROJECT NO. 987—LUMINOUS PAINTS FOR GUNS.—The problem of lighting seacoast guns has engaged the attention of the Board on several occasions prior to the initiation of the present project. Apparently the problem is hard to solve because, like the inventors of perpetual motion, we are trying to avoid the consequences of the laws of physics. In the illumination problem the attempt is made to light the surface on or near the gun brightly enough to be seen by the gunners yet not brightly enough to be visible to a hostile aerial observer. Since the least brightness perceptible to the unaided eye is less than one-millionth of the average illumination thrown on the road surface by the street lamps of the ordinary residential street lighting system, the difficulties of the lighting problem are obvious. The luminous paint will probably offer no difficulty so far as concerns discovery by aerial observers. The mode of application of the luminous material to the guns is the chief problem with that method of illumination. The tests have now been completed and the report is to be submitted shortly.

PROJECT NO. 990—TEST OF DULUX, NON-OXITE AND OTHER PAINTS.—So far, all four of the paints under test are showing equal efficiency. The advent of winter weather will doubtless effect a change in this situation. The results of these tests are being observed with interest, however, since one of the paints under test is that old standby of gun commanders, GI paint with varnish topcoat.

PROJECT NO. 998—RANGE DISPERSION, SEACOAST GUNS.—The tabulation of the DAPE's reported in Regular Army firings since 1928 has been completed. Comparative study on the dispersions given by the various guns with each type of projectile is proceeding. It seems that very few of the weapons used in target practice have shown a DAPE as good as should be expected from the PE values given in the range tables. Just how this condition might be corrected is not yet apparent although it is hoped further research may give some indication as to the cause of the discrepancies.

PROJECT NO. 1007—CLEANING AND PAINT STRIPPING DEVICES.—The Coast Artillery Board has tested two

modern cleaning and paint stripping devices, one a pressure steam cleaner, the other a cold stripping method using a concentrated chemical solution. Either method is much faster and is more economical of labor than the method of chipping and scraping by hand. The disposal of the residues from the paint stripping operation offers the principal difficulty with either of the two new methods. The cost of either method, if computed on a commercial basis is much less than for hand labor with scrapers but, from a budget standpoint, it is not easy to convert man power to money or vice versa. Therein will lie the greatest obstacle to providing such devices even though they may be found fully satisfactory.

PROJECT NO. 1010—REPEATERS AND LOADING COILS FOR FIELD WIRE LINES.—As yet the material for this test has not arrived at Fort Monroe. The loading coils, in technical tests made by Signal Corps Laboratory personnel, have shown great promise. By their use it is hoped to alleviate some of the troubles experienced by battery commanders whose CP's are linked to headquarters by long field lines when one of the G's or S's gets on the line to issue what the schools call "fragmentary oral orders." It is said that a properly loaded field wire line will function satisfactorily for distances up to about 30 miles. The repeating coils are rather an innovation to the Coast Artillery, being intended principally to enable buzzer telegraph to be sent over a circuit simultaneously with a telephone conversation.

PROJECT NO. 1012—ANTIAIRCRAFT MACHINE GUN FIRE CONTROL, METHODS AND EQUIPMENT.—The drafting and machine work involved in getting both new and old material ready for firing these tests have occupied much of the time of the Board since the publication of the last issue of the JOURNAL. Actual training of individual gunners and the firing of preliminary tests with .30-caliber guns started during October. The program will embrace a wide variety of subjects and will constitute the most extensive firing of machine guns held since the Aberdeen Proving Ground exercises of 1930. Among the subjects to be considered are:

Most suitable color for tracers.

Best type of mount.

Whether or not the fire of a four-gun platoon can be controlled effectively as a unit.

Whether individual tracer control is superior to the sighting devices under test.

Whether or not the functioning of various accessories such as back rests, flash hidens, cooling devices, etc., is satisfactory.

PROJECT NO. 1015—SHOE FITTING OUTFIT.—The Board has received neither the material nor the data for this project. It is hoped, however, that this shoe fitting device will, in addition to giving the correct shoe size, convince the recipient that he should wear that size shoe.

PROJECT NO. 1016—STOP RUST COMPOUND.—This is a commercial compound about the consistency of light engine oil in which, it is reported, are combined the preservative qualities of slushing oil with ease of application and transparency of appearance.

PROJECT NO. 1017—OPHTHALMIC TELEBINOCULARS.—The formidable name of this device will probably undergo considerable modification should it ever be necessary to discuss the instrument with the battery mechanic. The actual device is far simpler than anything previously submitted for the same purpose, which is stereoscopic training and testing. Although it is not quite so versatile as the T5 trainer the two will be compared during the proposed service tests.

PROJECT NO. 1019—SCOUT CAR T7.—No description of this vehicle can be given at this time. Since the T7 Scout Car was developed primarily for mechanized Infantry and Cavalry, it is not expected that it will exactly meet Coast Artillery requirements. It is hoped, however, that experience with the T7 model will furnish information upon which to base Coast Artillery specifications for replacement of outworn reconnaissance cars.

PROJECT NO. 1022—TEST OF TRAILER T7.—This project pertains to a two-wheel trailer built to provide a means for transporting the fire control equipment for an all-purpose Field Artillery battery equipped with a T8 anti-aircraft director. The Coast Artillery Board expects to determine whether or not the T7 trailer will be suitable for carrying the fire control equipment for an anti-aircraft battery equipped with the M3 anti-aircraft director.

PROJECT NO. 1023—PORTABLE KITCHEN, GASOLINE-BURNING.—Those who have tried to gather wood for operating a wood-burning range or portable kitchen when camped in an urban section will appreciate the purpose behind the development of a gasoline-burning kitchen. In these days, gasoline can be found on every corner while wood lots are few and far between. Plans for testing this kitchen will not be perfected until the material is received.



THERE WAS ABOUT AS MUCH CHANCE of a decisive action at Jutland as there would be of a knock-out if two prize fighters entered the ring, each one determined not to hit the other unless he could do so without any risk of being hit himself.—CAPTAIN C. C. GILL, U.S.N.

COAST ARTILLERY ACTIVITIES

Office of Chief of Coast Artillery

Chief of Coast Artillery
MAJOR GENERAL WILLIAM F. HASE

Executive
LIEUT. COL. HENRY T. BURGIN

Personnel Section
MAJOR R. T. PENDLETON

Matériel and Finance Section
MAJOR R. E. HAINES
MAJOR O. L. SPILLER
MAJOR C. W. BUNDY

Organization and Training Section
LIEUT. COL. E. E. BENNETT
LIEUT. COL. F. P. HARDWAY

Plans and Projects Section
LIEUT. COL. G. A. WILDRICK
MAJOR C. M. S. SKENE

Hawaiian Separate Coast Artillery Brigade News Letter

BRIGADE COMMANDER, BRIGADIER GENERAL ROBERT S. ABERNETHY
CHIEF OF STAFF, LIEUT. COL. FULTON Q. C. GARDNER, C.A.C.

S-1, LIEUT. COL. W. V. CARTER, A.G.D.
S-2, CAPT. WILLIAM F. LAFRENZ, C.A.C.

HARBOR DEFENSES OF HONOLULU
16th C.A.
COLONEL GEO. B. WERTENBAKER

SIXTY-FOURTH COAST ARTILLERY
COLONEL WILLIS G. PEACE

By Lieutenant John R. Lovell, C.A.C.

S-3, LIEUT. COL. BENJAMIN H. L. WILLIAMS, C.A.C.
S-4, MAJOR BIRD S. DUBOIS, C.A.C.

HARBOR DEFENSES OF PEARL HARBOR
15th C.A.
COLONEL AVERY J. COOPER

Major General Wells Retires

PROBABLY the biggest news that has occurred in the past two months was the unexpected voluntary retirement of Major General Briant H. Wells, Commander of the Hawaiian Department. General Wells was not due to retire until December 31, 1935. He went on leave October 1st, and the actual date of retirement will be December 31, 1934. General Wells will continue an active life as Secretary-Treasurer of the Hawaiian Sugar Planters' Association in the Hawaiian Islands.

Major General Halstead Dorey assumed command of the Hawaiian Department October 1. He was formerly commander of the Hawaiian Division, and will be an able successor to General Wells.

ATHLETICS

The athletic year, which coincides with the training year, ended in a blaze of glory upon the completion of the swimming season. Luke Field staged a brilliant rally and in the last meet of the season succeeded in defeating

the powerful Harbor Defenses of Honolulu team.

The Honolulu Sector Athletic Supremacy Trophy, the major athletic award for the Honolulu Sector was won by the Harbor Defenses of Pearl Harbor at Fort Kamehameha. Following is the final standing in the competition for this trophy:

Post	Boxing	Basket-ball	Track	Base-ball	Swimming	Total
Ft. Kamehameha.....	1000	800	990	428	746	3964
Ft. Shafter	957	600	1000	1000	397	3954
Luke Field	171	1000	667	857	1000	3695
H.D. of Honolulu....	603	000	561	222	905	2291

JAPANESE ROYAL COUPLE CALL

Their Imperial Highnesses, the Prince and Princess Tsunenori Kaya, members of the Japanese Royal Household, passed through Honolulu aboard the *Chichibu Maru*, en route to Japan after a vacation tour around the world and through the United States. The Royal couple stopped over in Honolulu 24 hours, during which time they were officially entertained by the Army, Navy, and Territorial Officials of Hawaii.

The First Battalion, 16th C.A., under the command of

Major Carl S. Doney, rendered the honors on arrival and departure. Secretary of the Territory, Arthur A. Greene; the Governor's Aide, Colonel Walter Dunham; Major General Briant H. Wells and his Aide, Lieutenant R. B. Hutchins; Major General Halstead Dorey and his Aide, Lieutenant Harold A. Meyer; and Brigadier General Robert S. Abernethy and his Aide, Lieutenant John R. Lovell, were received in the main salon aboard the liner immediately after it docked.

The Royal couple were very affable and democratic; they made a host of friends during their short stay in Hawaii.

THE MAUI FAIR

The Army's exhibit proved to be an outstanding attraction at the Maui Fair, which was attended by some ten thousand people from all over the Hawaiian Islands. Large crowds of people gathered around the 64th Coast Artillery matériel, which was attended by enlisted men who answered many questions and explained the operation of the guns and instruments.

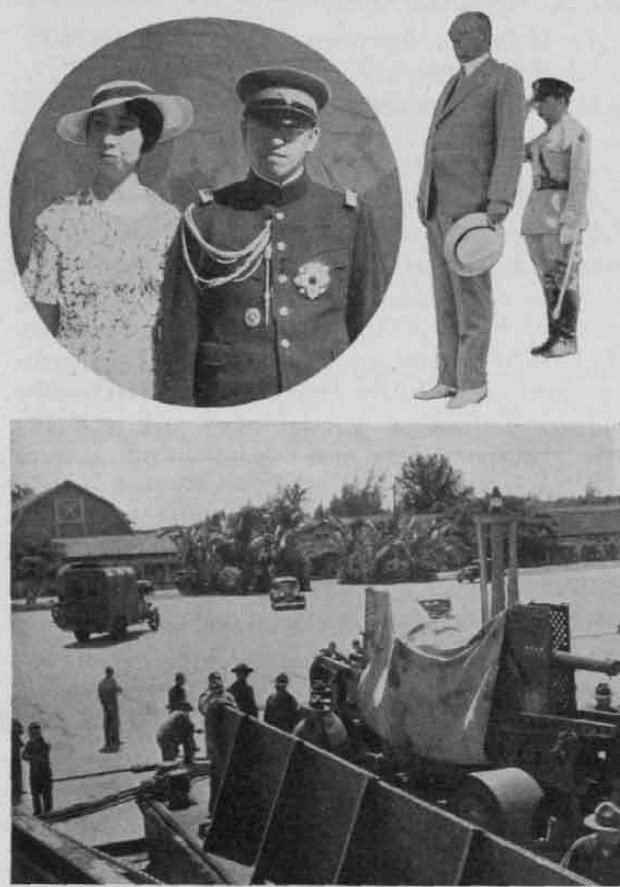
The camp was a model lay-out in every respect. The ladies in attendance admired the kitchen, and judging from the alignment of the tent pegs, Captain Brey and his assistants, Lieutenants Dean Luce and Don Webber, must have laid out the camp with a transit.

The Coast Artillery unit was required to perform twice daily, once in the morning and again in the evening. Their act consisted of going into position with 3-inch antiaircraft guns and .30 caliber machine guns. The Air Corps flew overhead at about 4,000 feet, and the 3-inch battery "shot them down" with blank ammunition. The remaining bombers in formation then dived on the gun position, all of which gave the machine guns an opportunity to open up. These activities and maneuvers thrilled the crowds very much.

The people on the Island of Maui were perfect hosts to the Army personnel. The Fair officials gave free tickets to the Fair ground for officers and men. They also arranged for them to visit many of the concessions and other activities. The people themselves were very hospitable and invited the officers and men to numerous social affairs; altogether it was a very enjoyable occasion and a fine vacation for those who attended.

Following is a letter of commendation from the Director of the Seventeenth Maui County Fair to the Commanding General of the Hawaiian Department:

"Allow me to express the deep appreciation of the officials of the 17th Maui County Fair for the excellent military exhibit furnished by units of your command. This exhibit was so highly instructive



Top, left to right: Prince and Princess Tsuenenori Kaya as they arrived in Honolulu. Attorney General Cummings receives the honors at Fort Shafter. Prince Kaya and Major General Briant H. Wells, Department Commander, receiving salute of the Guard of Honor. Bottom row: One of the 3-inch antiaircraft spider mount guns being placed aboard. Prince Kaya inspecting Guard of Honor, composed of 1st Battalion, 64th C.A.

and interesting that we considered it one of our main attractions. The appearance, conduct and discipline of the men comprising this unit and the remarkable order of their camp were a great revelation to the citizens of Maui. Their short stay here reflected great credit upon the 64th Coast Artillery and upon the army as a whole. The efficient work of Captain William G. Brey and of his officers, Lieutenants Dean Luce and Donald Webber, was particularly evident; their spirit of coöperation was reflected to a marked degree by the courteous explanations offered to the spectators by the enlisted members of the command. Please express to the above personnel our sincere appreciation of their accomplishments."

OVERS AND SHORTS

The Brigade Commander accompanied the Governor's inspection party to the Island of Maui aboard a Navy Sikorsky plane on Thursday, September 27, and inspected the 299th Infantry, Hawaiian National Guard, commanded by Colonel Gordon C. Ross. The inspection was very satisfactory in every respect, and the Guard made a fine impression on all the military personnel present. The Regiment's training was of a very high order, and it looked fit to take the field at any time.

Captain George W. Ricker, who recently graduated from the Command and General Staff School, and was assigned to duty with the 64th Coast Artillery at Fort Shafter, is detailed as Assistant in the office of Assistant Chief of Staff, G-3, Hawaiian Department.

Colonel Geo. B. Wertenbaker has assumed command of the Harbor Defenses of Honolulu at Fort Ruger. The Colonel arrived on the October Transport in the midst of a Department Maneuver. However, Lieutenant Colonel William E. Shedd had everything under control, and the new Commanding Officer was an observer for at least a few days.

Lieutenant Sanford J. Goodman, Lieutenant Roger Moore, First Sergeant Everett C. Corn, and Technical Sergeant Frank Adams have very ably coached a Honolulu Sector Swimming Team which is at the present time endeavoring to win the Outdoor Swimming Championship of the Hawaiian Islands. Hui Makani, a local club, is in the lead at present, 17 points to 7; but with two meets to go Sandy's team has a chance to take the lead and win the title.

1 1 1

Brigade Gunnery

By Captain Wm. F. Lafrenz, C.A.C.

NOW that the rainy season is starting over here, the Coast Artillery has changed from its target practice functions to maneuvers. It is too bad that a detailed description of the maneuvers, of our dispositions, and the interesting problems which arose and were solved, pertaining to long-range firing, cannot be described in detail. Sufficient to say that every enemy plane was shot

down at least three times (ask the 64th C.A. about their motto—"No Plane Shall Reach Oahu"), every enemy naval vessel was sunk (some more than once), and a most enjoyable time was had by all, picking out algeroba thorns from various parts of their anatomies while resting(?) at their guns, or endeavoring to seek a dry spot between raids. It is indeed strange that the rains always wait until the Hawaiian Coast Artillery takes the field, but as one of the sugar plantation managers said to the writer, "I'm always happy to welcome the Coast Artillery as I know we don't have to irrigate our cane for two weeks whenever you come out here on maneuvers." And that's that.

As predicted in the previous issue of the JOURNAL, the 64th Coast Artillery turned in some nice scores during the recent target practice season. Following is a tabulation by batteries of the results obtained:

ORGANIZATION	BATTERY COMD'R	SCORE
<i>3-inch AA Guns</i>		
Battery B,	Capt. O. G. Bucher	54.34
C,	Lt. G. L. Field	69.13
F,	Lt. T. L. Waters	61.84
G,	Capt. E. W. Timberlake	54.06
K,	Lt. S. J. Goodman	60.53
L,	Capt. W. G. Brey	59.23
<i>.50 Cal. Machine Guns</i>		
1st Plat., Btry. I,		66.79
2nd Plat., Btry. I,	Lt. Dean Luce	63.05
3rd Plat., Btry. I,		119.33
<i>.30 Cal. Machine Guns</i>		
1st Plat., Btry. I,	Lt. Dean Luce	83.08 and 75.95
2nd Plat., Btry. I,		88.14 and 115.56
3rd Plat., Btry. I,		97.06 and 89.92

The 55th Coast Artillery (TD), finished up their target practice season by firing .30 cal. M-G practices as additional antiaircraft assignments. Results obtained were satisfactory to all concerned.

ORGANIZATION	BATTERY COMD'R	SCORE
<i>.30 Cal. Machine Guns</i>		
Battery A,	Capt. M. M. Read	27.81
B,	Capt. A. K. Chambers	41.98
C,	Lt. L. T. Vickers	46.37
E,	Capt. H. D. Fiskien	62.80
F,	Lt. H. G. McFeely	52.31

To wind up the target practice season, the seacoast batteries having additional antiaircraft gun assignments fired 3-inch AA gun practices, using high explosive shell. While no scores were turned in on these practices (they being preliminary practices only) some good looking strings were fired, and the low, dull, "whmp" of the bursting H.E. shells reminded one of the days of 1918. As two of these batteries fired on the shore at Fort De-Russy, these practices were well attended by the Malahinis "wintering" at Waikiki. The organizations firing and their commanders are listed below:

Battery A, 15th C.A. (HD), Captain F. J. McSherry.
 Battery B, 15th C.A. (HD), Lieutenant H. T. Benz.
 Battery C, 15th C.A. (HD) Lieutenant L. S. Kirkpatrick.

Battery A, 16th C.A. (HD), Captain R. C. Jones.
 Battery D, 16th C.A. (HD), Captain K. P. Flagg.

Until the next target practice season rolls around, starting about March 1, 1935, your scribe bids you all "Aloha Nui Oe."

Fort Monroe News Letter

BRIGADIER GENERAL JOS. P. TRACY, U. S. ARMY,
Commanding.

COLONEL RUSSELL P. REEDER, 2d C.A.
Commanding Harbor Defenses of Chesapeake Bay

MAJOR J. D. POWERS,
Commanding 1st Bn., 51st C. A.

MAJOR FRANKLIN KEMBLE,
Commanding 3d Bn., 52d C.A.

By Major J. D. Powers, C.A.C.

SEPTEMBER and October were devoted to our own target practices, so after beautiful weather all summer for the National Guard, R.O.T.C., C.M.T.C., Reserves and Cadets, we started our own training in fog and rain. We were glad to have even half the annual allowances of ammunition and hope that next year we will get the full allowance. At this time, all practices have been completed except the Antiaircraft Machine Gun and Antiaircraft Searchlights. With winter coming on, the Searchlight battery anticipates many cold nights listening for Langley Field planes.

The high score in our practices went to Lieutenant J. H. Featherston (Battery "A," 51st Coast Artillery, 155-mm guns) with a score of 108.

The second lieutenants of the class of 1934 have reported in, much to the joy of the debs. Of the 14 at Fort Monroe only one is married, but if they equal the record of the class of '33, that condition will not last long. Lieutenant Jablonsky is on detached service at West Point, helping coach the Army football team, so our hopes of having him in our football team have gone aglimmering.

The C.C.C. reconditioning camps now have to be reckoned with just like the summer training camps, only they come four times a year instead of once.

The October camp was planned to process 3,700 men in 12 days. Captain R. J. Van Buskirk, the camp commander, organized the camp so that processing is continuous. Starting with a bath, the selectees are given their physical examination, inoculated and vaccinated, issued clothing and equipment, and sworn in. By this time they are ready to be assigned to a company and sent into the field. The processing line at its best handled 100 men per hour. In many cases men were on their way out to work camps within 24 hours after their arrival at Fort Monroe. Some of the newly commissioned second lieutenants (1934 edition) had the interesting and helpful experience of commanding the C.C.C. casual companies.

The 1st Battalion, 10th Marines, of the Fleet Marine Force, arrived at Fort Monroe September 26th. The battalion was commanded by Major H. S. Fassett, and consisted of a 155-mm. gun battery and a .50-cal. (AA)



FACULTY AND STAFF—1934-35 SCHOOL YEAR—THE COAST ARTILLERY SCHOOL

First Row (left to right): Maj. Phillips, C.A.C.; Maj. Caperton, Cav.; Maj. Kahle, C.A.C.; Maj. Blood, C.A.C.; Brig. Gen. Bishop, Assistant Commandant; Brig. Gen. Tracy, U.S.A., Commandant; Maj. Acheson, C.A.C.; Maj. Cramer, C.A.C.; Maj. Cochran, C.A.C.; Maj. Poland, Inf. Middle Row: Maj. Grimm, Jr., C.A.C.; Maj. Jackson, C.A.C.; Capt. Quinn, A.C.; Capt. Hickey, Jr., C.A.C.; Capt. Campbell, C.A.C.; Capt. Argo, C.A.C.; Capt. Christian, C.A.C.; Capt. Mackin, Jr., C.A.C.; 1st Lt. Tarrant, C.A.C., aide to General Tracy. Back Row: 1st Lt. Burnell, 2d, C.A.C.; 1st Lt. Thompson, C.A.C.; Capt deCamp, C.A.C.; 1st Lt. Bartlett, C.A.C.; Capt. Townsend, C.A.C.; 1st Lt. Morton, C.A.C.; 1st Lt. Crichlow, Jr., C.A.C.; Capt. Davis, C.A.C.

MG battery. The command consists of nine officers and 240 enlisted men, with 18 officers attached from the Marine School at Quantico. Four planes are attached from the Air Service of the Fleet Marine Force. The Battalion made the trip from Quantico to Norfolk by the Navy transport *Antares*, and then to Fort Monroe by barge. They landed at Fort Monroe after dark and had only one man fall overboard while unloading.

The firing position for their GPF battery was on the beach near Buckroe, so as not to interfere with work on the sea wall. The only fire control equipment brought along was four azimuth instruments, but the 51st Coast Artillery helped out with plotting boards and other needed gadgets. The training of this battery progressed very nicely, ending with two practices, which looked good, but we cannot say for certain, as the Marines took all records to Quantico.

The .50-cal. (AA) MG battery did not go so well. A lot of time was needed for individual training of the gunners, and as usual, the fishing boats crowded the field of fire. The Marines became convinced that with green gunners, the time and ammunition were insufficient to develop effective (AA) MG platoons.

Our enlisted men got quite a kick out of the Marine telephone operators. "Aye, Aye, Sir," instead of "yes sir;" "Tug on the range," instead of "Tug at starting point of course;" "Range foul," instead of "Field of Fire unsafe."

The battalion returned to Quantico on October 22d, saying they had enjoyed their stay at Fort Monroe and hoped to return next year.

Changes in personnel have been few but varied since

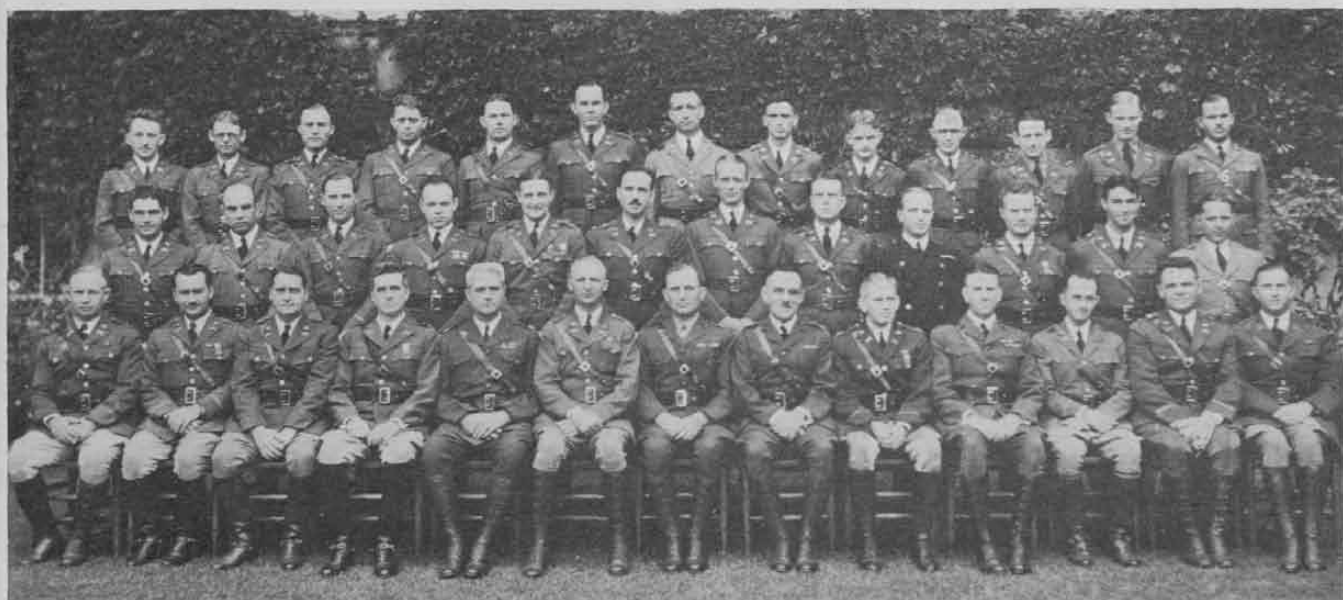
our last news letter. Brigadier General Percy P. Bishop, who has, since August, 1930, been Assistant Commandant of The Coast Artillery School, has left for his new command, The 4th Coast Artillery District. Colonel Harry L. Steele, recently returned from the Hawaiian Dept., has assumed his duties as Assistant Commandant. Fort Monroe has lost one who long has had the interest and welfare of members of this garrison not only in his hand, but also in his heart. We refer to Colonel Harry E. Comstock, QMC, who, after a long period of illness necessitating a sojourn at Walter Reed, returned to Fort Monroe, retiring on September 30th.

Captain McGarraugh and Lieutenant Kelly, both of the Harbor Defenses, were detailed aboard the U.S.S. *Colorado* from October 4th to 29th—Captain McGarraugh as Instructor on sound locator equipment; Lieutenant Kelly pursuing a course in Naval antiaircraft gunnery, from which he graduated with honors.

First Lieutenant Cortlandt Van R. Schuyler, having reported for duty with the 52d C.A., was promptly elected Police and Prison Officer and Provost Marshal, relieving Major Cedric F. Maguire, who, despite the halcyonic weather Fort Monroe has been enjoying, departed for new fields and fairer skies(?), Fort Barrancas.

Parades and reviews have been dotted all over the training schedule, even the Service Battalion including the Quartermaster, Medical, and Ordnance Detachments turning out "en masse."

"The troops of Fort Monroe are needed to participate in this celebration"—this is the key-note struck whenever any type of parade or celebration, great or small, is conceived within a radius of hundreds of miles of here. On



1934-35 STUDENTS—REGULAR COURSE, COAST ARTILLERY SCHOOL

First Row (left to right): 1st Lt. Rothgeb, 1st Lt. Cordell, 1st Lt. Kane, 1st Lt. Wm. H. J. Dunham, Capt. Perkins, U.S.M.C., Capt. Jefferson, Maj. Pickett, U.S.M.C., Maj. Griffin, U.S.M.C., Capt. Hafer, Capt. Pepper, U.S.M.C., 1st Lt. Rutter, 1st Lt. Anderson, 1st Lt. Shumate. Middle Row: 1st Lt. McNamee, 1st Lt. Ward, 1st Lt. McKinney, 1st Lt. Shunk, 1st Lt. Devens, 1st Lt. Bailey, 1st Lt. Tracy, 1st Lt. Haakensen, Lieut. Mankowski, Polish Navy; 1st Lt. Holcomb, 1st Lt. Gill, 1st Lt. Miller. Back Row: 1st Lt. Everett C. Dunham, 2d Lt. Peddicord, 1st Lt. Hartman, 1st Lt. McLamb, 1st Lt. Lepping, 2d Lt. Tomlin, 2d Lt. Schermacher, 1st Lt. Dayharsh, 1st Lt. Thomas, 2d Lt. Bain, 1st Lt. Shaw, 2d Lt. Thompson, 2d Lt. Gilbert.



Constructing the new sea wall.

October 19th we took part in the annual celebration at Yorktown; Major Franklin Kemble was Marshal of the Parade, the Provisional Battalion consisting of the 2d C.A. Band, Battery H, 2d C.A., and Battery F, 52d C.A., under the command of Captain Morrison; Battery A, 51st C.A., and Battery C, 2d C.A., commanded by Lieutenant Logan.

NEW CONCRETE SWIMMING POOL

A new open-air concrete swimming pool that embodies some interesting features recently has been completed. The main pool is 60 feet by 90 feet, and "spoon-shaped." The depth is three feet at the shallow end and $6\frac{1}{2}$ feet at the deep end, sloping to $9\frac{1}{2}$ feet five yards from this end. A smaller pool, for children and beginners, is 15 by 60 feet and varies in depth from eight inches to three feet.

"High Silica Cement," a new product, is used, and results obtained justify its selection. This cement gives a concrete that has a fine, smooth finish, of a pleasing color and is highly water-resistant. So well pleased were the local authorities with this cement that it was used as a test in 240 feet of the sea-wall.

The method of obtaining salt water for the pool is a novel one. Nineteen Moore Trench well points were jetted twenty feet into the beach at an interval of ten feet and connected to a six-inch header. A 4-inch double-suction, self-priming centrifugal pump, push-button control, provides 30,000 gallons of water an hour for the pools at a cost of 11 cents an hour. The pool intakes are placed at each corner at the bottom, each discharging in a different direction so as to provide a circular current in the pool. The water flows off through the scum gutters at the top. The rate of flow completely changes the pool every seven and one-half hours. This method of obtaining the water supply has proved to be excellent. The salt water is filtered through from twenty to one hundred feet of sand (according to the tide) before it reaches the well points and is about one-fifth fresh, which is sufficient to prevent the salt water from stinging the eyes. Its temperature is constant, about 68 degrees. The Army Medical

authorities have kept a constant check on the pool water and rate it as excellent. No filters or chlorinators are used. Every 48 hours five pounds of copper sulphate are placed in a perforated can in front of one of the intakes at the shallow end of the pool so as to eliminate the growth of algae in the water. All swimmers must go through a shower and hypo foot-bath before they can enter the pool.

The pool is lighted for night swimming by six overhead 2,000-watt flood lights and twenty-one 400-watt Westinghouse underwater floodlights placed thirty inches below the surface of the water.

The method of operation is such that the cost is kept to a minimum. The actual cost of the operation of the pool, except for two life-guards, is fifty cents an hour at night and twelve cents an hour during the daytime. Once each week the pool is closed for twelve hours for thorough cleaning.

THE OFFICERS' BEACH CLUB

One of the leading contributors to morale at Fort Monroe is the Officers' Beach Club. The summer camp situated at Fort Monroe is such that no officers from the Harbor Defenses can be spared during the summer months. Consequently, their families cannot get away on vacation as they must be here when the public schools open at the end of the summer training camp season. The Beach Club is a fortunate compromise as the families have all the enjoyment of a seaside resort and still the family heads are available for the arduous summer training schedule.



*Wide porches have been added to the Beach Club.
The Swimming Pool.*

Panama Canal Department News Letter

Department Artillery Officer
COLONEL FREDERIC H. SMITH, G.S.C.

Fort Amador
LIEUT. COL. JAMES S. DUSENBURY,
4th C.A. (AA).

Fort Sherman
LIEUT. COL. WILLIAM L. COLVIN,
1st C.A.

Fort Randolph
COLONEL RICHARD I. MCKENNEY,
1st C.A.

THE past two months have been devoted largely to the training of replacements resulting from the effects of the two-year law.

It was decided early in August to suspend further anti-aircraft firings in the 4th Coast Artillery (AA) until enough officers came from the States to give us the required number of officials for the practices. The officers having arrived, Battery "F" got under way in September and completed its practices. Battery "A" followed and has just finished, several schedules being postponed due to the rains. The firing schedule calls for 3" anti-aircraft firing of one Battery per week for the month of October. Between September 1st and November 2nd each lettered Battery, except the Mine Battery, will fire an anti-aircraft machine gun practice. There will also be trained two companies of the 33rd Infantry; one Battery of the 2nd Field Artillery, and seventeen platoons of the 11th Engineers.

Small arms practice has added to the joys of life for all Batteries. At the present writing, Battery "B" has yet to qualify its share of sharpshooters. During the month of August the Gunners' Board, speeded up under the direction of its president, Major Kimmel, completed its work, and the results have been recorded on the service records and pay accounts of the fortunate.

Fort Amador has experienced a large turnover of officers headed by the Pacific Sector Commander. Brigadier General Darrah was honored with reviews at the several posts on the Pacific side prior to his departure, one being held at Fort Amador on September 4th. A guard of honor, composed of specially selected platoons from each of the posts on the Pacific side, was assembled at Balboa on September 8th, the day of departure for his new station, Port of Embarkation, Brooklyn, New York. We consider ourselves very fortunate in having as General Darrah's successor Brigadier General John W. Gulick, who arrived October 3rd.

The month of September was marked by the departure of Colonel Russell P. Reeder for his new station at Fort Monroe, Virginia. A post party was tendered Colonel and Mrs. Reeder and other departing officers and their families, and the incoming officers and ladies on September 3rd at the post gymnasium. Colonel Reeder, in a most enjoyable talk "reviewed his reviews" and experiences as a "doughboy" during the past two years and expressed his regret at leaving Amador. On the afternoon of his departure the troops lined the street from Colonel Reeder's quarters to the main gate, while the band escorted the

automobile carrying the departing post commander and his family.

The best wishes of the entire garrison go with Colonel and Mrs. Reeder to their new station.

Among other officers who have left Fort Amador are Colonel Percy Kessler, Department Artillery Officer; Lieutenant Colonel Cook, Medical Corps; Major Aaron Bradshaw, Jr., our former Adjutant; Captain Vernon W. Hall; and Chaplain Peter C. Schroeder.

It is our pleasure to welcome as Post Commander Lieut. Col. James S. Dusenbury, who arrived early in September.

Captain Franklin E. Edgecomb took over the duties of Harbor Defense Adjutant upon the departure of Major Bradshaw. Other incoming officers include Major Meade Wildrick, Captain Bartlett, Captain Austin, QMC, Captain Hill, S.C., Captain Gillett, C.W.S., 1st Lieut. Vern Walbridge, 1st Lieut. J. F. Gamber, Luther W. Evans (Chaplain), 1st Lieut. Montgomery B. Raymond, 2nd Lieut. Laurie J. Hillberg, 2nd Lieut. Arthur L. Fuller, Jr., A.D.C., 2nd Lieut. John E. Metzler, 2nd Lieut. Edgar H. Kibler, Jr., 2nd Lieut. William G. Fritz, 2nd Lieut. Robert W. Hain.

Two events which occurred in August are worthy of note, the first being the regimental organization day of the 4th Coast Artillery (AA), and the second the anniversary of the opening of the Panama Canal on the 15th.

Organization day of the 4th Coast Artillery (AA) was celebrated on Sunday, August 19th, with a special service at the post theatre. Captain Franklin E. Edgecomb gave a formal address on the "Achievements of the Coast Artillery Corps." Sunday evening a program of amateur acts was presented by the organizations of the regiment. Suitable prizes were awarded the best acts.

Exercises were continued on Monday, August 20th, when formal ceremonies were held in the post gymnasium. The day opened with a reading of the regimental history of the 4th Coast Artillery (AA) by Major Aaron Bradshaw, Jr. Following this, addresses were made by General Fiske, Department Commander, and General Darrah, Sector Commander. Mrs. Thomas W. Darrah, Mrs. B. F. Duckwall, and Mrs. Manning M. Kimmel, constituted a committee to select the best appearing soldier, and their final decision resulted in the selection of Pvt. 1cl. John G. Sillick, Battery "F," 4th C.A. (AA). Following the exercises at the gymnasium, athletic contests were held on the parade ground with Battery "F," 4th C.A. (AA), scoring the most points.

Reference the opening of the Panama Canal the following extract is taken from the anniversary issue of the *Star and Herald*:

Twenty years ago today (August 15th) the Panama Railroad Steamship *Ancon* transited the Canal and formally opened the "world's greatest engineering miracle" to modern commerce. The *Ancon* made the transit from entrance to entrance in nine hours and forty minutes, carrying as guests of the Secretary of War about 200 people, including President Porras, Panama government officials, members of the diplomatic corps, officials of the Army and the Panama Canal.

In its twentieth year of operation the Panama Canal is patronized by approximately one hundred steamship lines having vessels transiting on regular schedules or calling at its terminal ports. No less than 500 steamship and air lines, oil companies and marine firms maintain agencies on the Isthmus to handle such trade as their firms bring to the Canal.

The original thirty-day trip from San Francisco to New York has been reduced to fourteen and even twelve days for fast passenger liners, the majority of which operate under the American flag. The Isthmus has become the terminal for four air lines and is regarded as the mecca for tourists desiring to know the Americas as intimately as they do the countries of the old world.

The Panama Canal's operating personnel averages approximately three thousand "Gold" employees, mostly American citizens, and a fluctuating total of about nine thousand "Silver" employees, the majority of whom are of West Indian origin.

The Coast Artillery in the Atlantic Sector reports a

quiet but very busy two months. During the month of September a 155 mm. practice was fired at Fort Sherman followed by a 12" D.C. long range practice. Advance information on the practices sounds very satisfactory. Small arms firing has also added to the joys of life. Anti-aircraft firing and searchlight practices are on the schedule at Fort Sherman. Fort Randolph is also engaged in anti-aircraft training. The 1st Coast Artillery mine practice is under way and will be completed sometime in October. The 1st Coast Artillery is also assisting the machine gun units of the 14th Infantry in their antiaircraft machine gun practice.

During September a post review was held at Fort Randolph followed by one the same day at Fort Sherman for Major General Fiske, Department Commander. The Fort Sherman band literally "doubled in brass" for both formations, making the trip by special boat.

Major Daniel Swan has left for the United States to await retirement.

Lieut. Colonel Richard I. McKenny has been acting as Harbor Defense Commander retaining station at Fort Randolph.

Lieut. Colonel William L. Colvin has arrived at Fort Sherman as Post Commander.

Other recent arrivals at Fort Sherman include Major George W. Easterday; Major Joseph I. Martin, Medical Corps; Captain Fenton, new Harbor Defense Adjutant; Captain W. J. McCarthy; Captain Linton Y. Hartman; Captain James W. Elder (Chaplain); 1st Lieut. Arthur E. Wilson; 2nd Lieut. Robert J. Lawlor. Recent arrivals at Fort Randolph include Captain Russell T. George; Captain Austin W. Lee, Q.M.C.

Philippines News Letter

Harbor Defenses of Manila and Subic Bays

Harbor Defense Commander
BRIG. GEN. STANLEY D. EMBICK

Executive and Seaward Defense Commander
COLONEL ROBERT W. COLLINS

59th Coast Artillery
LIEUT. COL. MATTHEW A. CROSS

60th Coast Artillery (AA)
LIEUT. COL. HOWARD K. LOUGHRY

91st Coast Artillery (P.S.)
LIEUT. COL. HOLLIS L. MULLER

92d Coast Artillery (P.S.)
LIEUT. COL. ALBERT L. LOUSTALOT

THESE defenses guard the most westerly (or is it easterly) outpost of the nation, and within it are found all types of Coast Artillery armament except railway. The 59th, a seacoast regiment, has several batteries at Corregidor and garrisons Forts Hughes and Drum—smaller outposts assisting in the defense of Manila Bay. Fort Drum is the "Concrete Battleship," one of the most unique land forts in the world. The 60th furnishes the defense for the fortified islands against aircraft. These two regiments are composed of American troops.

The 91st, a seacoast regiment, and the 92d, with tractor-drawn 155-mm. guns, are Philippine Scout organizations. One battalion of the latter has as its principal duty the guarding of the civil prisoners who perform work on Corregidor of a non-military nature. A prisoner was once heard to remark that he wished God had made the Island like the Americans wanted it.

The garrison has just finished the first month of what was hopefully called the "open training season." Unfortunately the "General's Staff" failed to coordinate its activities with J. Pluvius and the month brought a never-

ending succession of typhoons with 26.6 inches of rain. In spite of the weather the 59th completed its antiaircraft machine-gun firing, the 60th fired the rifle practices and the other regiments engaged in gas defense and other miscellaneous training.

The War Department allowed this command to take the monetary credit for the ammunition available for the last half of the 1934 calendar year and a well-rounded schedule of training has been prescribed. By firing smaller caliber batteries using less expensive ammunition, practically all organizations will be kept busy with target practice until the Christmas holidays. Also many batteries will fire their additional antiaircraft assignments and conduct firings to repel simulated landing attacks.

The officers of the post are just completing a three-months' department map maneuver. Fort Mills furnished the commanders and members of the staffs of one corps, consisting of three divisions. Forts McKinley and Stotsenberg each provided a corps to make up the army, the headquarters of this came from the Philippine Division. The maneuver is in three phases, the defense and the counterattack phases have been finished. Next month the pursuit phase concludes the maneuver with a final gathering of all headquarters at Fort McKinley. Practically all officers have taken part with considerable professional benefit, service school graduates renewing old acquaintances and the junior officers being given a well rounded introduction to their future tactical studies.

Kindley Field has not been moved, but it is much closer to Topside since the completion of the street car line; this stops a short distance from the officers' quarters. The car line is paralleled by an excellent automobile road.

Bowling has been the sport of the rainy season. The 59th, 60th and the Staff teams furnished a hot three-cornered race in the Officers' Bowling League, but youth was with the youngsters of the 59th and each member of the team is now the proud possessor of a handsome silver goblet. Lieutenant Peter Schmick won the season's high triple, Lieutenant John A. McComsey the high single, while Lieutenant Walter F. Ellis had the highest average score. In the Regimental Bowling Tournament Battery A, 60th C.A. (AA) was victor, thereby keeping up its reputation in athletics.

The sailing of the next transport greatly reduces the officer strength of the post. Colonel Collins and Colonel Cross are proceeding to their new stations by way of the Suez Canal. Colonel and Mrs. Loustalot, after a tour of the Malay Archipelago, return to the States by transport.

At the annual meeting of the Corregidor Club Colonel Loughry was elected president for the coming year. The golf course is in excellent condition. The greens have been enlarged and a new type of sand that makes for better putting is being used. A combination caddy house and quarters for servants is being built just southwest of the swimming pool, and what is now the sixth hole will become the first.

Fort MacArthur Notes

By Lieutenant Eugene C. Smallwood, 63rd C.A.

MOVEMENT, not only a Principle of War, but also a big half of the "Fire and —" team in Antiaircraft Artillery, is receiving due attention in the Sixty-Third—even the Band is sharing in this training. On August 9th the Band travelled 196 miles to Santa Maria by bus to participate in the Santa Barbara County Fair. While there, the Band participated in the street parade, gave two concerts each day, August 10th, 11th and 12th, and played daily for the Horse Show and nightly for the races. At 4:00 a.m., August 13th, all members embussed in Santa Maria High School busses and covered the 196 miles back to Fort MacArthur, arriving at 12:30 p.m. Warrant Officer R. Resta, assisted by Technical Sergeant E. B. Gentile, Second Leader, conducted the musical contributions of the Army.

The following letter of appreciation was received by Lieutenant Colonel H. R. Oldfield:

Sir:

I wish to thank you for the contribution you made to the success of our recent County Fair when you sent your band for our entertainment.

No branch of the Service is more popular in this community than the one which you command, and we hope that you will find it convenient and expedient to come our way soon again.

I wish to compliment you on the personnel of your Regimental Band. The boys conducted themselves in a very proper manner at all times, and I have heard nothing but very favorable comments.

With Kindest Regards and Best Wishes, I am,

Yours very truly,

JESSE H. CHAMBERS,
Secretary-Manager.

The weekly evening band concerts are becoming increasingly popular, due in part to the assistance of Mr. Don Philippini (director of the Los Angeles Philharmonic Orchestra and of the Municipal Band of Los Angeles) and Mr. Herbert L. Clarke, Municipal Band Leader of Long Beach. Mr. Philippini and Mr. Clarke have acted as Guest Conductors on several occasions.

Battery "A," 63d C.A., commanded by our recent bridegroom, Captain Lloyd W. Goepfert, moved out September 4th for March Field, to spend a month in searchlight drill and practice, coördinating its training with that of the Air Corps at that station.

Batteries "B" and "E" are preparing for the firing of annual target practice, which will take place in November perhaps, somewhere to the south, to escape interference by shipping.

Joint maneuvers with the Air Corps at March Field are scheduled for October, along with the overnight marches for which the 63rd is famous. A tentative trip is scheduled to the Big Pine Recreation Camp, 7,000 feet altitude, after

the crossing of a desert and negotiating El Cajon Pass, with all terrains and temperatures given an equal opportunity to try their skill against us. This trip will furnish the background for the MacArthur notes in the next issue.

Seven thousand three hundred more C.C.C. youths were processed and sent out from this post during the period July 10-August 24. This makes a total of more than 20,000 sent out by this small four-battery Post since the inception of the C.C.C., and this winter a total of 37 camps will be supplied and controlled by the Fort MacArthur District.

Reserve Officers from the 519th and 976th Coast Artilleries, and from the 32nd Infantry, completed their two weeks of active duty during August. They received some good shooting practice (the C.A. members), and are anxious to return.

Beautification of the Post is progressing rapidly. The S.E.R.A. approved a project calling for 50 laborers for 60 days, and with the help of these men, it is hoped to complete the planting of trees, shrubs and new lawns, so that the problem will resolve itself into one of maintenance. Great changes have been made in the appearance of the Post, to the delight of our neighboring cities, and of our personnel.

Changes in Officer personnel are taking place rapidly, and we who arrived a month ago are now becoming old-timers. Fifteen officers have left this month or will leave within two months, and at the present writing, thirteen have arrived or are under orders. Battery commanders are wondering if the members due will arrive in time to save the situation for needed timekeepers and safety officers before firing.

End of practice.

Classification of Coast Artillery Officers

BASED ON GENERAL RATING AS OF JUNE 30, 1934.

Ratings	Gen. Officers	Colonels	Lieut. Cols.	Majors	Captains	1st. Lieuts.	2nd Lieuts.	Totals
Superior .....	....	18	27	32	31	27	3	138
Excellent .....	....	22	51	112	171	194	88	638
Satisfactory .....	....	2	3	15	27	48	79	174
Unsatisfactory .....	....	....	....	....	3	1	....	4
Not Rated	2	....	2	3	9	9	35	60
Totals	2	42	83	162	241	279	205	1014

CHANGES IN GENERAL RATING RESULTING FROM 1934 GENERAL REVISION OF EFFICIENCY REPORTS AS COMPARED WITH THE PREVIOUS YEAR.

	Colonels	Lieut. Cols.	Majors	Captains	1st Lieuts.	2nd Lieuts.	Totals.
From Excellent to Superior	3	4	2	5	....	14
From Superior to Excellent	3	1	1	....	5
From Satisfactory to Excellent	2	4	14	17	37
From Excellent to Satisfactory	1	....	1	1	....	3
From Satisfactory to Unsatisfactory	1	1	....	2
Totals	4	9	9	22	17	61

SERVICE SCHOOL STATUS OF COAST ARTILLERY OFFICERS. THE FOLLOWING DATA DOES NOT INCLUDE OFFICERS WHO ATTENDED THE COAST ARTILLERY SCHOOL PRIOR TO 1919.

COAST ARTILLERY SCHOOL. (Adv., Bty. Officers and Reg. Courses)

	Colonels	Lieut. Cols.	Majors	Captains	1st Lieuts.	2nd Lieuts.
Graduates	11	78	156	235	207	4
Now attending C.A.S.	0	0	0	2	30	1
Non-graduates	(a) 33	(a) 5	(b) 6	(c) 4	(d) 42	200
Number eligible to attend	0	0	2	1	40	200

(a) 33 Colonels and 5 Lieutenant Colonels are over age limit or attended Leavenworth, and not the C.A.S. (b) 4 Majors attended Leavenworth, and not the C.A.S. (c) 3 Captains attended the C.A.S., but failed to graduate. (d) 1 First Lieutenant failed to graduate and one attended Leavenworth, and not the C.A.S.

COMMAND AND GENERAL STAFF SCHOOL

	Colonels	Lieut. Cols.	Majors	Captains	1st Lieuts.	2nd Lieuts.
Graduates	24	81	119	18	0	0
Now attending the C. & G. S. S.	0	1	4	10	6	0
Non-graduates	(a) 20	(a) 1	(b) 39	(c) 213	273	0
Number eligible to attend	0	0	36	185	273	0

(a) 20 Colonels and 1 Lieutenant Colonel are over age limit. (b) 2 Majors are over age limit and 1 failed to graduate. (c) 28 Captains are over age limit.

ARMY WAR COLLEGE

	Colonels	Lieut. Cols.	Majors	Captains	1st Lieuts.	2nd Lieuts.
Graduates	32	41	22	0	0	0
Number now attending	0	2	5	0	0	0
Non-graduates	(a) 12	(b) 40	(c) 135	(d) 241	0	0
Number eligible to attend	0	29	92	17	0	0

(a) 12 Colonels are over age limit. (b) 9 Lieutenant Colonels are over age limit; 2 Lieutenant Colonels are not graduates of Leavenworth. (c) 3 Majors are over age limit; 40 are not graduates of Leavenworth. (d) 1 Captain who is a graduate of Leavenworth is over age limit; 28 Captains (non-graduates of Leavenworth) are over age limit for Leavenworth.

THE FOREIGN MILITARY PRESS

Reviewed by Major Alexander L. P. Johnson, Infantry

CANADA—*Canadian Defense Quarterly*—July, 1934.
AN APPRECIATION OF THE RUSSO-JAPANESE SITUATION. By Lieut. W. W. Goforth, M.A., F.R.S.S.,
17th Duke of York Canadian Hussars.

Believing that a second Russo-Japanese war is highly probable eventually though not necessarily inevitable, the author seeks to fathom the implications of such a conflict in the light of published facts and some personal familiarity with the Far Eastern arena. He believes that only a substantial reversal of present policies and historic aspirations of both countries can avert a clash within the next five or ten years. The trend of events, in his opinion, points to an armed conflict. The fundamental causes are deeply grounded in history, clearly defined by geography, but superficially expressed by a conflict of economic interest.

Analyzing the economic factors, the author finds railways, fisheries and trade at the bottom of the dispute. The Chinese Eastern Railway divides Northern Manchuria and connects Vladivostok with the Trans-Siberian Railway. In the author's well-founded opinion, the Power which controls the C.E.R. necessarily dominates Northern Manchuria, and determines the fate of Vladivostok and Maritime Siberia in time of war, while at the same time it threatens or protects Korea and the more populous southern portion of Manchuria.

Siberian coastal waters contain the most valuable fisheries in the Western Pacific. Although the treaty of Portsmouth conceded fishing rights to Japan in those waters, the terms of this right have given rise to frequent controversies between the two powers. Russia and Japan have for many years competed for the trade of North China. In recent years Japan has been gaining steadily on its rival.

Among the geographical factors, the author points out that Manchuria constitutes the bridgehead of Korea—gateway to Japan. For Japan, therefore, it is not so much an area of economic exploitation, as a necessary insurance against invasion. At the same time, this bridgehead is a threat to Russia's hold on the Siberian coast. Therein, the author states, lies the unavoidable root of controversy. If Japan abandon Manchuria, she will create for Russia in Vladivostok an almost impregnable base for air operations against the great centers of population and industry in Japan. If, on the contrary, she extend her hold towards the Amur and Ussury Rivers, she will render untenable Russia's position on the Pacific coast.

The Great Khingan Range is a formidable barrier which defends Japan against attack from Irkutsk and Chita. The Amur River and the Little Khingan, on an average within 150 miles from railhead, should protect the Japanese against Russian attack based upon the circuitous

Chita-Khabarovsk Section of the Trans-Siberian Railway. The Ussury River, backed by the Kentel-Alin Range and the White Mountains of Korea, the author compares with the effectiveness of the Vosges. As the latter checkmated German efforts against Nancy, so will the former aid in frustrating any Russian stroke from Vladivostok. On the other hand, the numerous passes which pierce the Great Khingan Range are a serious menace to Japan. A successful thrust from Chita by a Russian army will focus on Tung-Liao. The capture or threat of capture of that city, used as an advanced base of Japanese cavalry operations in Jehol during 1933, would result in the collapse of Japanese resistance in Northern Manchuria.

Russia's enormous distance from her main bases of supply, the author thinks, is a source of weakness as well as of strength. It will make initial successes almost impossible, but by the same token will render her ultimate defeat an equally remote contingency. As an historical factor, the author notes that Soviet rule has not dimmed Russia's memory of her great bid for sea power. Barred from expansion westward and through India, only Persia and Manchuria afforded means for materializing Russia's dream of a warm water outlet. Great Britain watches over Persia, and Japan has defied Russia ever to attempt anything in Manchuria.

Pointing out some of the radical differences presented by the strategical problem of 1934 compared with that of 1904, the author concludes that Japan will, at least initially, possess greater liberty of action. She can rapidly concentrate superior forces at any one of the several widely separated points, but it will be difficult for her to maintain this numerical superiority. The author doubts the wisdom or likelihood of an initial Japanese thrust across the Amur River in the direction of Blagoveshchensk to force the capitulation of Russian forces east of that point. He believes that the struggle of the main forces will probably take place in the vicinity of Manchuli, 600 miles northwest of Blagoveshchensk, with Chita, midway between Lake Baikal and the Manchukuo border, as the main Japanese objective. Conversely, Tungliao, gateway to Mukden, the author thinks, would be the logical objective of the Russians.

China's position in case of war would, in the author's opinion, be quite different than it was thirty years ago. Chinese military leaders are bitterly hostile to Japan. The Jehol campaign served to consolidate the Japanese rear against possible Chinese guerilla attacks in the event of war with Russia. This campaign, moreover, afforded excellent training for the Japanese staff, and provided Japan with an excellent base for outflanking Chita, 500 miles to the north. As to the attitude of other Powers,

the author believes, "it would take something more than suicidal Russian diplomacy to bring Britain in on the side of Japan, and the possibility of the United States siding with Russia is even more remote."

In the author's opinion, cavalry may play a decisive part in a Russo-Japanese conflict. Armored cars and mechanized forces would be unsuited to operations across the Gobi Desert and the mountain barriers, while the terrain is ideal for cavalry. Although Russian cavalry in 1904 was superior to that of the Japanese, no arm in Japan has received more careful attention in recent years than the cavalry. The efficiency of Japanese artillery in relation to that of Russia is even greater today than it was in 1904.

The most reliable prediction anyone could venture, the author writes, is that a war between these Powers would be productive of indecisive results. Japan cannot hope for more than to drive the Russians behind Lake Baikal. There the Japanese advance would come to a standstill. The most favorable result the Russian staff can hope for is to drive the Japanese off the Asiatic mainland. Japanese victory would mean the acquisition of a vast territory with unlimited possibilities of settlement, exploitation and development. It would make Japan a military power second to none, and would render Japan's claim to naval parity with Great Britain and the United States beyond dispute. Moreover, it would enable Japan to distribute the financial burden incidental to her military position over a materially increased population. A probable secondary result of Japanese victory, the author believes, would be an offensive and defensive alliance between the British Empire and the United States. Defeat of Russia would entail the collapse of the Soviet system in Russia with a return to modified republicanism or even restoration of the Monarchy.

A Russian victory, on the other hand, would lead to the absorption by Russia of Mongolia, Manchuria and Korea. It would strengthen the power of the Soviet rulers in Moscow, and might provide a strong temptation for a further test of strength with the British Empire. Victory for either side would confer upon the victor temporary control of Northern China. Japan is less likely to suffer financial embarrassment and economic impoverishment than Russia except in the case of a crushing defeat.

THE FUTURE OF GERMANY. By Major T. V. Scudamore, V.D., F.R.G.S., The British Columbia Regiment.

With an intimate knowledge of Germany extending over a period of 33 years, the author endeavors to prognosticate the future of the German Reich. The national Socialist party, he writes, came into power as the direct result of depression and unemployment. Their task has become more difficult as the depression became more intense, partly because of general world conditions and partly because of the errors committed by the leaders. Brief estimates of the leading figures of the Third Reich

form an interesting background of this evaluation of the situation.

The late Fieldmarshal von Hindenburg, the author writes, whose first accession to the presidency was hailed as a sign of German militarism once more rampant, lived to become the apostle of peace—a rock of moderation in the whirlpool of German politics; but in his extreme old age with rapidly failing health, he was hardly more than a figurehead.

Hitler is the one man everybody trusts. Worshipped almost as a god, his fall would bring disillusion to such a vast number of Germans that the tragic consequences to the peace of Europe and the world would be far greater than the successful fruition of his plans. Hitler's associates and assistants, the author states, are without exception extremely able men.

Dr. Goebbels, Minister of Propaganda, is an intellectual who attended no less than eight universities. A club foot prevented him from serving during the war. Although his courage enabled him to overcome this handicap, it did not keep him from having a warped mind. The Jews are his pet aversion, which is never far from the surface. By an irony of fate, his wife's stepfather is a Jew.

Dr. Hanfstaengel, in charge of the Foreign Press Bureau, and close personal friend of Hitler, is at times very approachable, but prone to be abusive of journalists. There is ample evidence, the author states, to warrant doubt as to the accuracy of some of his public utterances.

Vice-Chancellor von Papen, erstwhile military attaché in Washington, and more recently German Ambassador to Austria, is a devout Catholic, member of the old nobility, an imperialist with a taste for intrigue without the ability to intrigue successfully. His speeches do more harm than good. The author writes him off as a failure and a disappointed man.

Captain Roehm, late commander of the Nazi storm troops, summarily liquidated by the second Nazi revolution, was a man attractive neither in looks nor character. Reports current about him in Germany are unrepeatable.

General Hermann von Goering, Premier of Prussia, the author characterizes as ruthless. A member of the aristocracy, he was with Hitler in the abortive "putch" of 1923. He was wounded in that affair, and escaped to Austria. Goering revels in fancy uniforms and plasters himself on all occasions with his array of decorations. His first step on attaining power was to promote himself from captain to Lieutenant General. It is jokingly said of Goering that when a pipe bursts in his house he puts on an admiral's uniform before calling a plumber.

The author credits the Hitler regime with having reduced unemployment, restored the moral fibre of the German people, and leveled all classes. Germany's leaving the League of Nations the author qualifies as a vigorous protest against wasting time in talk with little result. The Nazi government believes in direct contact without intervention of third parties. The Saar will return to Germany but, in the author's opinion, the vote will not

be as unanimous as it would have been two years ago. The return of the Saar to Germany, however, will leave open the question of repurchase of mines from France. They are working at a loss, and France had eight or nine years more use of them than she was entitled to have. This, the author states, is ample compensation for her own destroyed mines which have been working at full blast since 1926.

Austria is the next big issue, and the author thinks that sooner or later her destiny must be joined to that of Germany. Much misrepresentation has been published about Nazi Germany, the author states. There is dreadful disillusion and genuine poverty. There have been outrages, but they have been made most of. As to the Jewish question, the author writes, Jews have never been more than tolerated in Germany. In hard times Jews are blamed for conditions which they did not create but which their business acumen enables them to turn to profit. Although there was and is a campaign against Jews, the extent of the brutalities, the author states, has been greatly exaggerated. This campaign, however, has bankrupted Germany's export trade, while the quarrel with the Catholic Church has done incalculable harm to the Nazi cause at home. In conclusion the author states that the Nazis do not want war, but demand the recognition of Germany as an equal among nations.

URUGUAY.—*Revista Militar y Naval*.—March-April, 1934.

THE ARMIES OF THE AMERICAS AND PAN-AMERICANISM. By Lieutenant Colonel Eduardo U. Genta.

To the civilian, the author writes, it might seem incongruous that army men should have any friendly interest in the cause of Pan-Americanism. He points to the curious fact that, contrary to popular belief, there is a strong, fraternal camaraderie among military men of all nations. The bias or prejudice against the stranger, the foreigner, so common among civilians, does not exist among men of the profession of arms. Indeed, the author adds, "if there are any obstacles in the way of fraternal relations between nations they must be sought elsewhere than in the minds and hearts of soldiers."

As the power of contemporary Russia is derived from thirty-six constituent republics, and as the greatness of the United States rests upon forty-eight sovereign states, so, the author believes, the day is bound to come which will translate Bolívar's dream of a federation of American republics into reality. The author conceives Pan-Americanism as a federation of Fatherlands united by historic and racial ties, by spiritual, economic and defensive reciprocity with absolute sincerity and mutual respect as the basis of concord. He suggests that in the various inter-American congresses greater opportunities be given for the active participation of military men. Their background of training and tradition of honor and uprightness, which is so often lacking in civilians, would be the best guaranty that they would sincerely and honestly strive to bring about a betterment of the lot of mankind.

CZECHOSLOVAKIA — *Vojenské Rozhledy* — April, 1934.

ACCURACY OF BATTLE REPORTS. Anonymous.

The unnamed author discusses a number of interesting historic examples where the failure to render accurate reports in the course of battle led to serious, and occasionally to disastrous consequences. The author cites the commander of Samsonoff's left corps at Tannenberg, in August, 1914, who reported that he was "standing firmly as a rock" five hours after his command had started its retreat. Again, General Rennenkampf, after his disastrous defeat near the Mazurian Lakes, where he lost 80,000 men, 150 guns and 120 machine guns, calmly reported that "he broke off the action, disengaged his troops from hostile contact and that, after a brief rest, his troops would be ready to renew the action. . . ." The Russian official communique reporting the capture of Lemberg stated that "General Russki's gallant troops were wading knee deep in blood in the streets of Lemberg . . ." when as a matter of fact the Austrians had evacuated the place three days before and there had not been an Austrian soldier in town when the Russians entered.

On December 8, 1917, the commander of the Turkish Eighth Army received information that the British had decisively beaten his right wing. In order to avoid having portions of his army cut off, the Turkish commander decided to evacuate Jerusalem, and the British entered the city without firing a shot. In reality only a Turkish outpost detachment had been driven in by a British patrol.

The unnamed author attributes inaccuracies in battle reports to the following causes: 1. superficiality; 2. lack of a sense of responsibility; 3. egotism; 4. fear of superiors; 5. cowardice; 6. an inclination towards the sensational; 7. dishonorable pandering to personal interests; 8. tendency to become panicky; 9. moral depression.

GREAT BRITAIN—*Army, Navy and Air Force Gazette*—August 2, 1934.

THE HORSE RACKET—CAR ALLOWANCE REQUIRED. Editorial.

Commenting upon the traditional forage and other allowances to mounted officers, the editorial writer observes that there are few officers who would regret the passing of the "second forage." The number of polo players is limited, he states, and hunting is no longer regarded as a necessary preparation for war. Both pastimes, even with subsidized horses, are beyond the financial scope of the average officer. "Just as the horse is overdue for mechanization," he suggests, ". . . so the allowance which should today replace the forage allowance is a car allowance." The automobile, the author states, has become a necessary part of the officer's equipment, and it is freely used in connection with the performance of duties for which no allowance is provided. In case of war, these cars would become a far more valuable reserve than horses, and a knowledge of the gasoline motor would, by the same token, be more valuable to officers, than a knowledge of

"stables." It costs the government £35,000 a year to maintain a total of 900 privately owned mounts. "This," the author states, "is out of all proportion to the actual needs; it is grotesque when viewed from a business standpoint; and while it is absorbing an undue proportion of army funds, it is unlikely to produce any addition to our war potential."

HUNGARY—*Magyar Katonai Szemle*—May, 1934.

TACTICAL EMPLOYMENT OF MECHANIZED AND MOTORIZED FORCES. By Lieutenant General Charles Gerbert, retired.

The author reviews the prevailing professional opinion with respect to the proper tactical employment of the different types of tanks and armored cars. The small tank, he notes, can be employed on independent missions, while the heavy tank is essentially a weapon of accompaniment for infantry. The light and medium tanks, on the other hand, are capable of performing both types of missions.

The French "Renault" tank still remains the principal representative in the class of light tanks. Modernized in design and construction, the new Renault is capable of a speed of 18 km. per hour. It is a weapon peculiarly suited to give support to the infantry in the attack. Although this tank might on occasion be employed on independent missions, the author does not believe it to be adapted to such employment. The heavy tank, of which the French "Char C-2" is the best representative, is too slow for independent action. Owing to its heavy armor and armament, this tank, the author states, is essentially a weapon of position warfare.

The small tank, armed with a machine gun and capable of high speed is, in the author's opinion, especially well adapted for reconnaissance missions in the service of the mechanized force, while the armored car supplies the best means for long-distance reconnaissance. The artillery tank, armed with a single field gun, was designed to provide artillery support for the mechanized force in action. The author believes, however, that motorization of the field artillery in general will render this type of tank superfluous.

The British developed an amphibian tank, the "Carden Lloyd." It carries an armored plate 7-9-mm. and weighs one ton. It is armed with a single machine gun, and is capable of a speed of 65 km.p.h. on roads, 10 km.p.h. in still water, and has a climbing capacity of 30-45°. The French "Schneider-Laurent" tank is capable of a speed of 45 km.p.h. on wheels, 30 km.p.h. on tracks and 16 km.p.h. in still water. Both tanks apparently proved successful. The stream with a depth of one and one-half meters and width of four to five meters is no longer an obstacle to these amphibian tanks.

The French tactical plan, the author writes, contemplates the attachment of a tank regiment (90 light tanks) to the division in the attack. Since the French division normally attacks with regiments abreast, each with two

battalions in line and one in reserve, the assault battalion will receive the direct support of the tank company. According to the French point of view, the author states, tank action independent of the infantry is altogether inconceivable; hence tanks will not, as a rule, go more than 300 meters beyond the infantry objective, but will await the assault wave before pressing forward to the next objective. The author believes that this method of attack subordinates the tank to the progress of the foot soldier, hence it needlessly sacrifices favorable opportunities to exploit success.

Heavy tank companies or battalions are attached under the French plan of action to divisions making the main effort. The method of their employment is entirely discretionary with the division commander. Since the mission of these tanks contemplates penetration of the hostile front to the enemy artillery position, they will precede the infantry assault and press forward directly to their objective.

The author writes that in an attack on a six-division front of about 18-20 km., the French would probably employ six light tank regiments and three heavy tank battalions. He visualizes the French tank attack penetrating the hostile position in successive waves, engaging the enemy artillery and reserves, thereby seeking to facilitate the advance of the infantry. In the author's opinion, this method of attack might effect a breach along a wide front, but the penetration would not reach a great depth except by a repetition of blows.

Russian military opinion estimates that a force of ten divisions would require a complement of 2,000 tanks, a total of 31 battalions or three battalions to a division. In addition, the Soviet army commander will have at his disposal a reserve force of 1,000 additional tanks. From this the author concludes that the Soviet military experts contemplate a tank battle fought in a succession of waves deployed in great depth and seeking decisive results. He declines to take the Russian figures seriously, and observes that while Soviet Russia would require 15,000 tanks to meet the estimates, the available supply actually amounts to only six or seven hundred.

Discussing the mechanized and motorized forces and so-called "rapid forces" maintained by some of the principal powers, and the effectiveness of available anti-tank defense, the author summarizes his conclusions briefly as follows:

1. The main effort of the infantry attack will normally have tank support.
2. Tanks will play an active part in the outpost zone.
3. Exceptionally tanks may attack independently.
4. Anti-tank defense from fixed positions holds out promise of effectiveness; mobile anti-tank defense is not likely to succeed.
5. The idea of mechanized forces seems to have been abandoned in favor of motorized troops which, in conjunction with cavalry, constitute the modern "rapid force," their action well in advance of the main army and on the flanks must be expected.

NATIONAL GUARD NOTES

Extracts of Address by Major General George E. Leach

Chief of National Guard Bureau

THE long period devoted to the organization of units was followed by a period during which the settling of new problems established precedents and familiarized the troops with successful methods of administration. As good habits were formed and administration became a matter of reputation, problems of training came to the fore. Today the National Guard has greatly improved the quality of its personnel. Its morale is high. It enjoys prestige and warm popular support. Its training has improved to the point that further progress cannot be looked for until its present problems are given the attention of professional officers who are in a position to make authoritative decisions. These decisions will be mischievous rather than helpful if made only by officers who know little or nothing of the peculiar character and problems of the National Guard. The need for this understanding is urgent.

It must be of concern to you that an officer of the Regular Army whose service has been in any great extent with the National Guard is almost precluded from appointment to the War Department General Staff, and that there is with four exceptions not an officer on the War Department General Staff of approximately 100 officers who has had service with the Guard in a training, responsible position since the National Defense Act. You would not consider for appointment on the War Department General Staff a Regular officer who has not had training with Regular troops—then why would you almost preclude from the War Department General Staff officers of the Regular Army whose training has been with a component that is twice the size of the Regular Army in what is at least purported to be trained combat personnel?

All details of officers to the War Department General Staff are now made from graduates of the War College except in the case of additional members who come from the various services. It may interest you to know that last year's class at the Army War College has in it only one officer who had ever had duty as an instructor in the National Guard. It is required that 50% of the graduates of the War College will be available for duty immediately on the General Staff. This means that only those officers who have had one year's command duty immediately preceding their detail to the War College may be sent directly to the General Staff. As no credit is given to a National Guard instructor for command duty

it can be immediately seen that he is 50% ineligible for detail to the War College.

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We can make it (the National Guard) better—with the help of a War Department staffed by officers who understand the problems peculiar to our citizen-soldiery. I do not mean to impugn its good will; but Regular Army officers must serve with the Guard in order to aid it intelligently. I cannot sufficiently impress upon you gentlemen the variety of ways in which it differs from the kind of troops you are accustomed to. The War Department will be slow to reach a thorough understanding of the Guard while officers who are detailed as instructors find themselves handicapped in reaching the General Staff because such duty is not classified as command duty with troops.

In my opinion it should be so classified—at least in many cases—because in reality it does more in many instances to prepare an officer professionally to serve effectively in war than a troop command in the Regular Army. In the first place in serving in a regular unit he is dealing with a type of unit and enlisted man that will disappear in time of war. His chances of service with higher tactical units in the Regular Army are remote.

In the National Guard the instructor may see entire divisions and brigades together. The instructor of a National Guard unit is dealing with the only type of soldier he will meet in battle. To give credit for command duty with troops to those instructors with the National Guard whose service is an actual fact the equivalent or more than the equivalent, in as far as professional preparation for war is concerned, would tend to invite into that field many able officers who have fought shy of it in order not to jeopardize their chances for professional advancement. It would bring to the General Staff a greater proportion of officers who know the Guard and know it intimately.

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After almost three years in the National Guard Bureau I have seen our Guard in many states and in Puerto Rico. I have seen them in their training camps. I have observed their conduct during civil disturbances that would have been far more serious but for their presence. I believe that my varied opportunities in the Observation Post of the Bureau and from visits to the front lines, fit me as well as any one to express an opinion regarding the general worth of the Guard.

It is magnificent! It is the bulwark of our state and local governments. It is a safeguard to the Nation.

This great army of 190,000 Guardsmen is the reliance of our people in times of calamity or distress, whether fire or flood, earthquake or hurricane, in riot or civil commotion. In time of war it is our first line of defense and our largest.

We in the National Guard Bureau are not content. It is not because the Guard has not amply justified its existence; it is not because its virtues do not by far outweigh its vices; it is not because it has not made progress. We are not content today because we feel that we are just beginning to see the real possibilities in our system; because our progress has been so great that it has opened up a new world of possibilities. We look upon the Guard today, not as bearing fruit, not as even flowering, but as a seedling that is putting forth its first green leaves.

In Sunny California

By *H. F. Sammis, 251st C.A. (AA)*

REFLECTING on the movement of this command to camp at Ventura, California, this year, brings to mind events of the several past years since this regiment has moved under its own power. The first year found the San Diego complement headed for Fort MacArthur, a distance of 120 miles. To say that the column straggled would be putting it mildly. Breaks in the column, due largely to motor trouble, were as great as two miles. At the end of the first day's march (some sixty odd miles) the last of the vehicles pulled into the overnight camp two hours late. The arrival at camp the next day showed a marked improvement, but several trucks came in at the end of a towline.

The return to home station was an even greater improvement over the second day of the march to camp. However, several trucks arrived home on the end of a leash.

The next two years, thanks to the untiring efforts of the caretaker mechanics, the usually unsung heroes of a motorized unit, found the march to camp even better than before. The head of the column was in camp right on the minute, this drew forth favorable comment from the inspecting officers.

Then came the famous march to San Luis Obispo, the longest ever attempted by a national guard unit. This four-day march was pulled off on perfect schedule. Again the mechanics worked night and day to get the equipment there. One mechanic was found under a truck at the side of the road sound asleep from the exhaustion of working all day and all night without rest.

The 1934 march, while not as long as that of 1933, clearly indicated the progress made over a period of four years. Practically no major repairs were necessary, all serials arrived at their destination on time, although the

mechanics had to work hard, the old 1918 matériel got there and back on schedule.

The credit is not due to the durability of the 1918 FWD's. It is due entirely to the progress in training among drivers and others handling the trucks. The rolling stock had to be nursed along and it took a great amount of training and experience to get it through. The word that we may expect to have something more modern with which to work before another camp is most encouraging. It is hard to vision the glorious thrill of traveling more than ten miles an hour on pneumatic tires behind motors that hit on all "barrels."

After spending the previous night at the armory, the 1st battalion, 251st Coast Artillery (AA), left San Diego at dawn, Saturday, August 4, for the annual training encampment at Ventura. Friday night was taken up with loading equipment. Final inspection was made of the physical condition of the men, followed by more work and then, if the men were lucky, a few minutes sleep, reveille at 2:30. After a hurried breakfast, the first serial of the convoy left at 4 a.m. for Recreation Park, Long Beach, the other serials followed at short intervals. Roaring motors of sixty trucks sounded through the quiet streets near the armory and little rest was to be had until after 5 a.m. when all were on the way.

The first major stop was at San Clemente, where the men had lunch. Sunday found the San Diego contingent on the last leg of the 200 mile journey to the seaside park, Ventura. The advance detachment under the command of Captain Fred B. Haines, preceded the convoy by several days and had the camp ready for occupation when the main column arrived.

Guns, lights, sound locators, technical equipment and the three kinds of communication (telephone, long and short wave radio) went into immediate action upon arrival at the camp. Monday the camp was a scene of bustling activity, with every unit getting settled for the two-week stay. In the afternoon there was a formal guard mount with Battery A relieving the guard formerly furnished by Battery E of San Pedro. This ceremony was followed by a regimental retreat parade. Tuesday brought a surprise visit from the Adjutant General of California, Brigadier General Seth E. Howard. After a review in his honor, the General joined the officers at mess.

Wednesday, after a full day of drill and work, the officers of the regiment held a dinner at Pierpont Inn for the officials and leading citizenry of Ventura as a formal expression of gratitude for the kindness, courtesy and co-operation of the people of that city in providing the camp-site.

The second week brought the practice and record firing, and the searchlight drill. Planes were furnished by the 40th Division Aviation for that purpose. Another camp, probably the most successful one the 251st has ever had has passed into history.

The staff for the 1934 camp included Lieutenant Colonel H. H. Morehead, commanding; Major John H.

Sherman, executive and motor matériel; Major Paul Ingebretson, surgeon; Captain Lesley E. Spencer, instructor; Captain Fred B. Haines, supply; Captain James B. Willey, regimental adjutant; Captain Marden A. Herbert, plans and training; Lieutenant Bryant Kearney, personnel adjutant, and Lieutenant Ted Enter, chemical warfare. Lieutenant Colonel Paul Arndt, A. G. Office and Major Harry R. Pierce were inspectors.

THE 251ST ON THE AIR

The 251st returns to the air! Presenting the "Album of Action," the San Diego units of the California National Guard will start a new series of radio broadcasts over local outlets, in the very near future. This regiment is not a newcomer to the work of presenting radio programs, as, earlier this year, the unit presented a series of programs called "The Old Sarge," which presented a picture of the life of an old sergeant, who had made an exhaustive study of the history of the Guard and loved to tell stories of his experiences.

Written and produced by your correspondent, who is identified with Pacific Coast broadcasting, the new radio series promises to be of interest, not only to Guardsmen, and those of the military profession, but to the general public as well. The "Album of Action" will be a word-picture-scrapbook of the National Guard, portraying the history and the many and varied activities of the Guard today.

To date, it has not been determined which of the two network outlets will be used, but the series will begin early in December. Although most Guard units have presented their bands, or speakers, it is believed that the 251st is the first to use a dramatic program to familiarize the public with the National Guard and all that it offers, not only to individuals, but to the public.

Notwithstanding that no recruiting methods are used on the program the response has been gratifying.

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N.Y.N.G. Coast Artillery Brigade Activities

By Lieutenant Colonel Oscar C. Warner, C.A.C.

GENERAL WARD TO RETIRE

On December 4, seven massed regiments will participate in a review to be given in honor of Major General Ward, Adjutant General, State of New York, on the occasion of his retirement. Besides the three regiments of the Coast Artillery Brigade, the 14th Inf. and 106th Inf. of Brooklyn, the 107th Inf. of Manhattan and the 258th F.A. (155's) will assemble in the 248th Field Artillery armory, the largest armory in the world.

ACTIVITIES OF THE 212TH C.A. (AA)

On October 8 the 1st battalion of the 212th gave a review and parade in honor of the visiting students from

23 Italian universities. These students are on a good will tour of the United States and have visited universities as far west as Chicago. After the parade by the 1st Battalion, a pageant was staged by the students similar to that which is customary on graduation day in each university town in Italy. The costumes, trumpets, and drums used in the pageant were similar to those used in medieval times. The University of Bologna, founded in 1088, oldest university in the world, was represented. A very colorful exhibition of flag-waving by the massed flags of the universities was given at the end of the pageant. In conclusion Colonel Ottman, and Lieutenant Colonel Gaunche, 212th C.A. made short addresses of welcome. The response was made by Noble Commendatore Antonio Grossardi, Consul General of Italy, and Colonel Poli, Chief of Staff of the Italian National Guard. Among others present were Colonel Blanc, Inspector General of the Italian National Guard; Captain Vincent Vedovi, Natl. Comdr. of Italian World War Veterans of the United States, and Dr. Salvatore Bonnanno, State Comdr. of Italian World War Veterans, of the United States.

ACTIVITIES OF THE 245TH C.A. (HD)

The annual review given to the United Spanish War Veterans of Brooklyn, will be held this year on November 24, 1934. Mr. Leon McCord, Commander in Chief of the United States War Veterans will be present to take the review.

The annual Christmas week review will be given to Major General Haskell, Commanding the 27th Division, N.Y.N.G. This will be followed by a Christmas tree party and dance in the officers' club rooms and all batteries celebrate the same night with festivities appropriate to the occasion.

The regimental inventory of Federal property was held on November 2, 1934. The State administrative inspection of all units was made by Lieutenant Colonel Bowditch of the 27th Division Staff, on November 25th and 26th. The Federal Armory inspections will be held late in January, 1935.

Gunners' instruction began in September and will end with the written examinations in February and March.

ACTIVITIES OF THE 244TH C.A. (TD)

The 244th (TD) has settled down to regular armory duties after a most successful training period at Ft. Ontario. Army Extension schools are in full swing, and on the drill floor stress is being laid on recruit and gunners' instruction.

The regiment has just had its yearly state inspection and received several commendations from the inspecting officer, Lieutenant Colonel Bowditch. He particularly commented on the improved showing over last year.

The armory at 125 W. 14th St., New York City, recently has been painted throughout and now presents a very attractive appearance.

COAST ARTILLERY ORDERS

(Covering the period September 1 to October 31, 1934)

Colonel C. G. Bunker, retired, physical disability, September 30.

Colonel L. R. Burgess, retired, physical disability, September 30.

Colonel W. A. Covington, retired, physical disability, September 30.

Colonel M. S. Crissy, retired, physical disability, September 30.

Colonel Frank Geere, retired, physical disability, September 30.

Colonel H. B. Grant, report to President Army retiring board, Ninth Corps Area.

Colonel C. H. Hilton, retired, physical disability, September 30.

Colonel H. S. Kerrick, retired, physical disability, October 31.

Colonel W. W. Merrill, retired, upon own application, October 31.

Colonel W. H. Monroe, retired, physical disability, September 30.

Colonel F. W. Stopford, retired, physical disability, September 30.

Lieutenant Colonel M. P. Andruss, promoted Colonel, September 1.

Lieutenant Colonel D. M. Ashbridge, retired, physical disability, September 30.

Lieutenant Colonel L. C. Brinton, Jr., promoted Colonel, October 1.

Lieutenant Colonel G. W. Cocheu, promoted Colonel, October 1.

Lieutenant Colonel W. M. Colvin, promoted Colonel, October 1.

Lieutenant Colonel W. S. Fulton, retired, physical disability, September 30.

Lieutenant Colonel Albert Gilmore, promoted Colonel, October 1.

Lieutenant Colonel W. W. Hicks, from Hawaii, to 52d, Fort Hancock.

Lieutenant Colonel Clifford Jones, promoted Colonel, October 1.

Lieutenant Colonel W. C. Knight, retired, physical disability, September 30.

Lieutenant Colonel Franc Lecocq, promoted Colonel, September 1.

Lieutenant Colonel J. P. McCaskey, Jr., retired, physical disability, October 31.

Lieutenant Colonel W. R. McCleary, report to President Army retiring board, Letterman's General Hospital.

Lieutenant Colonel W. W. Merrill, promoted Colonel, October 1.

Lieutenant Colonel C. H. Patterson, promoted Colonel, October 1.

Lieutenant Colonel George Ruhlen, Jr., from 3d, Ft. Rosecrans, to Org. Res. 9th Corps Area, Los Angeles, October 10.

Lieutenant Colonel F. H. Smith, promoted Colonel, October 1.

Lieutenant Colonel D. N. Swan, retired, physical disability, October 31.

Lieutenant Colonel Lewis Turtle, promoted Colonel, October 1.

Major H. H. Acheson, promoted Lieutenant Colonel, October 1.

Major T. M. Chase, promoted Lieutenant Colonel, September 1.

Major W. P. Cherrington, retired, physical disability, September 30.

Major R. B. Cocroft, promoted Lieutenant Colonel, October 2.

Major J. F. Cottrell, promoted Lieutenant Colonel, October 1.

Major R. F. Cox, promoted Lieutenant Colonel, October 1.

Major R. S. Dodson, promoted Lieutenant Colonel, October 1.

Major D. L. Dutton, from 62d, Ft. Totten, to University of Delaware, Newark.

Major W. D. Frazer, promoted Lieutenant Colonel, October 1.

Major C. A. French, from H.D. of Narragansett Bay, Ft. Adams, to H.D. of Portland, Ft. Preble, October 15.

Major F. P. Hardaway, promoted Lieutenant Colonel, October 1.

Major G. D. Holland, retired, physical disability, September 30.

Major J. H. Hood, promoted Lieutenant Colonel, October 1.

Major Creighton Kerr, from 2d, Ft. Monroe, to Hawaii, sailing New York, January 9.

Major W. C. Koenig, promoted Lieutenant Colonel, October 1.

Major R. M. Levy, from 13th, Ft. Barrancas, to Adjutant General's Department, Ft. McPherson. Previous orders revoked.

Major C. F. Maguire, from 51st, Ft. Monroe, to 13th, Ft. Barrancas.

Major G. F. Moore, promoted Lieutenant Colonel, October 1.

Major E. P. Noyes, promoted Lieutenant Colonel, October 1.

Major W. G. Patterson, retired, physical disability.

Major C. D. Peirce, promoted Lieutenant Colonel, October 1.

Major F. A. Price, promoted Lieutenant Colonel, October 1.

Major E. C. Seeds, relieved observation and treatment, Walter Reed General Hospital, to Knoxville.

Major Willis Shippam, promoted Lieutenant Colonel, October 1.

Major L. L. Stuart, from the Philippines, to 6th, Ft. Winfield Scott.

Major R. L. Tilton, promoted Lieutenant Colonel, October 1.

Captain C. R. Adams, promoted Major, October 1.

Captain C. H. Ainsworth, retired, physical disability, October 31.

Captain H. G. Archibald, to 6th, Ft. Winfield Scott. Previous orders amended.

Captain A. J. Bennett, retired, physical disability, October 31.

Captain T. J. Betts, from 61st, Ft. Sheridan, to the Philippines, sailing New York, December 14, revoked.

Captain A. C. Cleveland, retired, physical disability, September 30.

Captain H. P. Detwiler, to commanding officer, submarine mine depot, Ft. Monroe, in addition to other duties.

Captain N. H. Duval, retired, physical disability, October 31.

Captain J. K. Freeman, retired, physical disability, September 30.

Captain M. B. Gibson, from 9th, Ft. Banks, to the Philippines, sailing New York, December 14, revoked.

Captain W. J. Gilbert, to Walter Reed General Hospital, Washington, D. C., for observation and treatment.

Captain L. W. Goepfert, from 63d, Ft. MacArthur, to the Philippines, sailing San Francisco, January 4.

Captain D. B. Greenwood, from 63d, Ft. MacArthur, to Hawaii, sailing San Francisco, November 6, revoked.

Captain V. W. Hall, from Panama to Org. Res. 4th Corps Area, Jackson, Miss.

Captain J. E. Harrison, retired, physical disability, September 30.

Captain G. W. Hovey, promoted Major, October 1.

Captain B. T. Ipock, from 62d, Ft. Totten, to the Philippines, sailing New York, December 14.

Captain T. E. Jeffords, from 14th, Ft. Worden, to Hawaii, sailing San Francisco, January 5.

Captain P. P. Lowry, promoted Major, September 1.

Captain J. J. Maher, retired, physical disability, October 31.

Captain E. W. Miller, retired, physical disability, September 30.

Captain Maurice Morgan, promoted Major, October 1.

Captain G. W. Ricker, placed on detached officers' list, November 16.

Captain D. J. Rutherford, from Panama, to Org. Res., 9th Corps Area, Seattle.

Captain J. A. Ryan, retired, physical disability, September 30.

Captain A. B. Smith, retired, physical disability, September 30.

Captain J. O. Smithley, retired, physical disability, October 31.

Captain H. W. Ulmo, report to President retiring board, Ft. Benning.

Captain V. W. Wortman, from 61st, Ft. Sheridan, to University of Illinois, Urbana.

Captain L. P. Vane, retired, physical disability, September 30.

First Lieutenant G. R. Burgess, from 62d, Ft. Totten, to office Assistant Secretary of War, Washington, D. C.

First Lieutenant W. H. Burns, retired, physical disability, September 30.

First Lieutenant G. A. Chester, from Hawaii, to 52d, Ft. Monroe.

First Lieutenant F. J. Cunningham, from 62d Ft. Totten, to University of Delaware, Newark.

First Lieutenant R. E. Dingeman, promoted Captain, October 1.

First Lieutenant F. B. Dodge, Jr., from 52d, Ft. Hancock, to Hawaii, sailing New York, January 9.

First Lieutenant L. E. Gray, retired, physical disability, September 30.

First Lieutenant P. T. Gregory, promoted Captain, October 1.

First Lieutenant W. E. Griffin, promoted Captain, October 1.

First Lieutenant J. L. Harbaugh, Jr., from 2d Corps Area, Governors Island, to Judge Advocate General for duty, December 1.

First Lieutenant J. J. Johnson, promoted Captain, October 1.

First Lieutenant H. F. Meyers, promoted Captain, October 1.

First Lieutenant J. D. Moss, from Washington, D. C., to 52d, Ft. Hancock.

First Lieutenant O. A. Nelson, promoted Captain, October 1.

First Lieutenant G. F. Nichols, promoted Captain, October 1.

First Lieutenant F. T. Ostenberg, from 52d, Ft. Monroe, to the Philippines, sailing New York, December 14.

First Lieutenant P. H. Raymond, from Panama, to 62d, Ft. Totten.

First Lieutenant H. W. Richmond, retired, physical disability, October 31.

First Lieutenant Horace Speed, Jr., from 69th, Ft. McClellan, to Owensboro High School, Owensboro, Kentucky.

First Lieutenant G. H. Vogel, transferred to Quartermaster Corps, September 11.

First Lieutenant W. H. Webb, retired, physical disability, September 30.

First Lieutenant A. E. Wilson, promoted Captain, October 1.

First Lieutenant C. F. Wilson, from 7th, Ft. Hancock, to Hawaii, sailing New York, December 14.

First Lieutenant C. C. Witman, retired, physical disability, September 30.

First Lieutenant L. A. Zimmer, from 61st, Ft. Sheridan, to University of Minnesota, Minneapolis.

Second Lieutenant J. G. Bain, promoted First Lieutenant, September 1.

Second Lieutenant J. T. Barber, promoted First Lieutenant, October 1.

Second Lieutenant K. M. Briggs, from 6th, Ft. Winfield Scott, to Panama, sailing San Francisco, November 24.

Second Lieutenant N. A. Congdon, from

51st, Ft. Monroe, to Panama, sailing New York, December 14.

Second Lieutenant Paul Elias, promoted First Lieutenant, October 1.

Second Lieutenant L. McI. Guyer, promoted First Lieutenant, October 1.

Second Lieutenant Joseph Horridge, promoted First Lieutenant, October 1.

Second Lieutenant A. A. Koscielniak, from the Philippines, to 51st, Ft. Monroe.

Second Lieutenant W. H. Parr, promoted First Lieutenant, October 1.

Second Lieutenant C. G. Patterson, from 51st, Ft. Monroe, to the Philippines, sailing New York, December 14.

Second Lieutenant E. D. Peddicord, promoted First Lieutenant, September 1.

Second Lieutenant A. C. Peterson, from Panama, to 7th, Ft. Hancock.

Second Lieutenant M. B. Raymond, promoted First Lieutenant, August 30.

Second Lieutenant J. G. Reynolds, from 63d, Ft. MacArthur, to the Philippines, sailing San Francisco, November 9.

Second Lieutenant Andrew Samuels, Jr., promoted First Lieutenant, October 1.

Second Lieutenant A. W. Schermacher, promoted First Lieutenant, September 1.

Second Lieutenant Preston Steele, to the Philippines, sailing San Francisco, February 26. Previous orders amended.

Second Lieutenant P. W. Steinback, Jr., from 63d, Ft. MacArthur, to Ft. Slocum. Previous orders revoked.

Second Lieutenant M. R. Thompson, promoted First Lieutenant, October 1.

Second Lieutenant R. F. Tomlin, promoted First Lieutenant, September 1.

Second Lieutenant L. T. Vickers, promoted First Lieutenant, September 1.

Warrant Officer N. W. Raymond, relieved C. A. School, Ft. Monroe, to the Philippines, sailing New York, December 14.

Master Sergeant Isadore Finkelstein, retired, 11th, Ft. H. G. Wright, September 30.

Master Sergeant Frank Huff, 11th Ft. H. G. Wright, retired, October 31.

First Sergeant F. H. Bailey, 52d, Ft. Hancock, retired, October 31.

First Sergeant A. A. Bostrom, 11th, Ft. H. G. Wright, retired, September 30.

First Sergeant Walter Lewiski, 9th, Ft. Banks, retired, October 31.

First Sergeant W. L. Raley, 13th, Ft. Barrancas, retired, October 31.

First Sergeant James Toomey, 10th, Ft. Adams, retired, September 30.

Sergeant Aud Back, 2d, Ft. Monroe, retired, September 30.

Sergeant William Lake, 6th, Ft. Winfield Scott, retired, September 30.

Sergeant Larkin Ratliff, 6th, Ft. Winfield Scott, retired, October 31.

Sergeant W. A. Ray, retired, 59th, Ft. Mills, September 30.

Extracts from an Address Delivered by Major General William F. Hase

(Continued from page 422)

supplying them, and putting them in motion in the event of war."

After the Spanish-American War, President Theodore Roosevelt stated:

"We shall maintain in peace a fairly complete skeleton of a large army. In particular it is essential that we shall possess a number of extra officers trained in peace to perform efficiently the duties urgently required upon the breaking out of war."

General Douglas MacArthur, the brilliant Chief of Staff of the Army in his testimony before the Military Affairs Committee in April, 1933, stated:

"The foundation of the Regular Army is the officer. He is the soul of the system. If you have to cut everything out of the National Defense Act, the last element should be the officer corps. If you have to discharge every soldier, if you have to do away with everything else, I would still professionally advise you to keep those 12,000 officers. They are the mainspring of the whole mechanism; each one of them would be worth a thousand men at the beginning of a war. They are the only ones who can take this heterogeneous mass and make of it a homogeneous fighting group."

Looking ahead to the draft of our full man power, it is estimated that 200,000 officers will be required. Where are these trained officers to come from? We hope that the R.O.T.C. units will in time provide a reservoir from which they can be drawn.

You can therefore understand how critical the abolition of these R.O.T.C. units would be.

Only about nine per cent of the students who take the

training in the R.O.T.C. units have chosen to follow a military career. There is no obligation to accept a commission in the Organized Reserves.

What type of training do they undergo? Some colleges have units of only one arm of the service; some concentrate on two or three; many of them have four or five different branches.

These boys in the formative period of their lives undergo physical training and soon acquire a good posture, and an attitude of promptness, obedience, courtesy, justice, initiative and, finally, leadership.

When they complete their training they are of the highest type of our manhood, intelligent leaders who will be able to direct and lead the millions of patriotic boys who will fill the ranks, and will be cannon fodder unless well led.

This country will never countenance the large standing armies of Central Europe; it will depend upon the citizen soldiery.

The National Defense Act provides the organization and training to insure that the citizen soldiery will be led efficiently. This training is the sole function of the R.O.T.C. units.

General Douglas MacArthur in May, 1932, said:

"Any Army can live on short rations, it can be insufficiently clothed and housed, it can be poorly armed and equipped, but in action it is doomed to destruction without the trained and adequate leadership of its officers. An efficient and sufficient corps of officers means the difference between victory and defeat."

Would you want your boy to go into battle under the leadership of an R.O.T.C. graduate or would you wish him to go following blindly along behind a leader who did not have the first rudiments of the Art of War?

RESERVE NOTES

Washington Conferences

THE first conference of the school year was held in the conference room of the Munitions Building on Tuesday, September 11. Plans were outlined for the winter course by Lieutenant Colonel E. B. Gray, the Unit Instructor. We were favored with a few remarks by the Senior Instructor, Washington Reserve Units, Colonel W. W. McCammon, Infantry; also a short talk by Major Edwin S. Bettelheim, Jr., President of the Washington Chapter of the Reserve Officers' Association and by Major Bennett E. Molter, National Secretary, Reserve Officers' Association. Major John Caswell, Jr., 913th, newly-elected President of the Coast Artillery Club of Washington, presided.

On October 9, we were privileged to hear a delightful talk by Major General William F. Hase, Chief of Coast Artillery. Extracts from this instructive program are published elsewhere in this issue. The attendance was 75, mostly Coast Artillery Reserve Officers.

On October 23, the first troop school session was held, on the subject of "The Organization of the Infantry Division." The school was conducted by the Instructor. The same subject will be covered in the November meeting of the troop school, to be held on November 27. This will be the last troop school of the calendar year. Commencing with the January meeting, the subjects covered will be preparatory to the conduct of the C.M.T.C. camps next summer. The first session will be devoted to "Gunnery for Seacoast Artillery."

1 1 1

Washington Chapter Holds Meeting

THE annual banquet and business meeting of the Washington Chapter of the United States Coast Artillery Association was held at the Army and Navy Country Club on the evening of November 13. The meeting was unusually well attended, about 75 officers being present. Major W. W. Burns, 260th C.A. (AA), the retiring president, presided during the early part of the meeting.

The meeting was opened by a toast to the Commander-in-Chief, following this there was a brief period of silent meditation in memory of deceased members. After the transaction of routine business the following officers were nominated and declared elected for the ensuing year:

President, Major General Henry Todd, Jr., U.S.A. Retired.

Vice-President, Lieutenant Colonel Earl W. Thompson, C.A.-Res.

Secretary-Treasurer, Captain LeRoy Mann, 260th C.A. (D.C.N.G.).

The newly-elected officers were inducted into office. Lieutenant Colonel Earl W. Thompson was called upon to act as toastmaster and performed this duty in a masterly manner.

As honor guests there were present the Chief of Coast Artillery, Major General William F. Hase, Major General Richmond P. Davis, U.S.A., Ret., Major General Henry D. Todd, the newly-elected president, Brigadier General Andrew Moses, U.S.A., Colonel Douglas Duvall, M.C., Ret., all of these made short addresses which were much to the point and greatly appreciated by those present. Other short addresses were made by Lieutenant Colonel Rufus Maddox, C.W. (formerly CAC), Lieutenant Colonel E. B. Gray, C.A.C., Captain LeRoy Mann, 260th D.C.N.G. and several others. Inspiring messages containing many helpful suggestions were read from two prominent former Coast Artillery officers who could not be present; they were Brigadier General Joseph D. Tracy, U.S.A. and Brigadier General John W. Gulick, U.S.A., formerly Chief of Coast Artillery and President of the Association. General Gulick may very properly be considered as the father of the Association. It is due largely to his foresight and interest in all that affects the welfare of the Coast Artillery Corps that brought the organization into being.

The policy of rotating the elective officers of the Washington Chapter among the three components of the Army was continued. It is believed that this provision has a most salutary effect and goes a long way to stimulate interest and enthusiasm. A vote of thanks was extended to the retiring officers. It is hoped that these meetings can be held more frequently than in the past as they tend to promote harmony, good fellowship, mutual understanding and respect among the several components.

1 1 1

The Journal Traveling in Fast Company

IT is much more pleasant to receive boosts than kicks. Too many of the latter come our way in spite of our best efforts, but at intervals there comes to the editorial sanctum an unsolicited, and therefore a most welcome boost. We take the liberty of quoting from a letter recently received from an officer residing in California:

"The JOURNAL is one of the best military magazines I have ever seen. In fact to my mind there are only five magazines in the United States worth buying. They are the JOURNAL, the *Military Engineer*, *Reader's Digest*, *Current History* and *Engineering News-Record*, so you can see that the JOURNAL is in fairly select company when it gets on the table in my room."

BOOK REVIEWS

HIGH COMMAND IN THE WORLD WAR. By William Dilworth Puleston, Captain, U.S.N. Charles Scribner's Sons. New York. \$3.00.

By Major General H. D. Todd, Jr., Retired

There are two distinct opinions in reference to the question—do men make history or does history make men? Alexander the Great, Cæsar, Napoleon, for example, dominated their times and can be said to have made history; but on the other hand countless men have been pushed into commanding positions by force of circumstances. Many of these, who developed into real leaders and thus made history, owe their prominence to events beyond their control. At the start of the war no man or small group of men dominated Europe. The men who now stand out as leaders in that struggle came slowly into prominence. History had a large share in making them.

Captain Puleston's book affords a most interesting study of the rise to power and their actions when in power of the many men concerned with the "high command" during the World War. The author described the path which he states will lead the reader with the least interruption through the maze of events of the World War. This path is "marked out by the diplomatic decisions made by the civil rulers of Europe in their pre-war diplomacy that led to the war; the peace-time strategical dispositions of the European fleets and armies made by the military authorities to support these decisions, and the decisive naval and military events that followed after the declaration of war."

We first find our attention called to policies and acts of the statesmen in the various capitols and then to the estimates of the situation, the decision and operation of the military leaders, admirals and generals.

Throughout the book the author shows his belief that the Kaiser exercised far more control than is generally attributed to him. He was convinced that Serbia would give way to Austria; he did not believe the Czar would intervene to help the assassins of a prince, and considered Russia economically and militarily unready for war; he thought France would hold Russia back on account of France's financial condition and lack of heavy artillery; and he did not consider that England would intervene when her interests were not involved.

If the author is correct, and events appear to justify his statement, it would be difficult to form a more illogical estimate of the situation than that formed by the German Emperor.

Turning to the "high command" in the British government we have a picture of the policies and decisions of Prime Minister Asquith and his assistants before the outbreak of hostilities. Great responsibilities were thrown

on the members of the British Cabinet, and their actions as described in the book will convince the average American that in general they deserve well of their country; particularly Asquith, Grey and Haldane.

Lloyd George is an interesting figure. He was all for peace, wanted to proclaim neutrality and led a portion of the Cabinet in opposition to intervening. Later after the war began he worked hard for victory. Although with scarcely any knowledge of the art and science of war, he and also the irrespressible Churchill considered themselves strategists of a high order and were quite prepared to overrule the Cabinet's military advisers. On short notice either of these gentlemen was capable of producing plausible papers on the war that pointed to comparatively easy ways of beating Germany.

When Winston Churchill first joined the Cabinet, he and Lloyd George were closely associated and both of them opposed the appropriations for the Navy. Then as often happens when responsibility falls, as soon as Churchill was transferred to the Admiralty in 1912 his responsibility for the efficiency of the fleet quickly caused him to change his views and he became a supporter of the Navy.

He also should be given great credit for approving the action of the First Sea Lord, Prince Louis of Battenberg, when on July 26, 1914, he ordered the first and second British fleets not to disperse after the maneuvers which had ended. He must, however, share with Lloyd George and Kitchener the responsibility for that tragic and pitiful affair—the Dardanelles Expedition.

Premier Asquith's calling Field Marshal Kitchener to the Cabinet to preside over the War Office was extremely popular in England. This soldier possessing great leadership had world wide prestige. His keen mind foresaw the long duration of the war and the great effort to raise, equip and train what became the great British Army is largely due to him.

"But for Kitchener there would have been no British Army to step into the breach first in July, 1916, and again in the spring of 1917, when the French army had been all but destroyed by the Germans." Unfortunately, however, he must have been totally ignorant of the history of "Attacks on Fortified Harbors" or he would never have authorized the expedition against the Dardanelles.

Turning to the high command in the French and German Armies there is an interesting comparison between the methods at each headquarters. At the German headquarters the doctrine was to the effect that the Supreme Commander could bring his forces to the battlefield but must then leave the direction of the forces to his subordinate commanders. This was diametrically opposed to

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the French view that in spite of all difficulties, a battle could and should be directed; and the battle of the Marne, and the events leading up to it, certainly indicate that the French retention of command is the better method. The author considers Joffre and von Moltke's successor—von Falkenhaym as evenly matched as their armies and pays great tribute to each. His reasoning in this comparison appears logical and it is believed that the author will be sustained by history.

The book contains an interesting account of the relations existing between the French Government and the army leaders, both before and during the war, and the reader is convinced that the army won its campaigns in spite of the government. A long time passed and many ups and downs occurred before Foch was placed where he could make history. In fact his doctrine, preached at the French War College, "Attack, again attack, always attack," came near ruining the French Army at the beginning of the war and at one time he had no command. The author describes Haig as the great leader of the British Army and refers to his solid abilities, his supreme loyalty to his king, his country and his allies, and to his indomitable faith in his army.

Being written by a highly educated, nonpartisan naval officer it is natural to find an accurate description of the battle of Jutland. It is hard to conceive however of a clearer picture of that struggle than is given in the book. It is so plainly presented that the average layman can easily grasp and retain all of the event from the beginning to the end.

As a history of a fleet engagement it ranks with the classic account of a ship's fight that was written by the gunnery officer of the *Derfflinger*. It has been said that Admiral Beatty owed his rapid advancement to his pluck, his dash and his ability as a polo player.

When one reads that he attacked von Hipper's five battle cruisers with six battle cruisers and four super-dreadnaughts and not only lost two battle cruisers but had two of his battleships badly mauled while no German ships were sunk, and also that von Hipper's men scored four times as many hits as did the British, it would appear that the German Government had a different way of selecting its flag officers. The laurels of the battle of Jutland apparently belong to the German high command—to Admiral von Scheer and to von Hipper. In discussing the operations of this battle the author makes what is believed to be conflicting statements.

For instance, in one place he states, "behind the dreadnaughts came a relatively more powerful fleet of English predreadnaughts, while the fleets of France, Italy and Japan formed a potential reserve that included several dreadnaughts. Had both fleets been destroyed (at Jutland) the Allies would have still possessed a great numerical superiority that would have insured control of the sea." In another place we read "A German victory would have raised the so-called blockade of Germany, cut the communication of the British armies overseas and starved the United Kingdom."

It is believed, in comparing these statements, that it would have been impossible for the German fleet to severely defeat or crush the British fleet without being rendered far inferior to the remaining sea power of the Allies. In general, the author is very fair in his description of men and events and evidently realizes that the decision of those in power were almost always made with knowledge of but one side of the picture, and he states, "Critics have condemned the military leaders on both sides as being equally sterile and stupid. Yet it is probable that there was more uniform excellence in the conduct of the World War than in any that Europe, the world's greatest war-maker, has ever seen."

The book is evidently the result of long study, an accurate analysis and logical reasoning. Also, the author wisely refrains from discussing the American "high command." It will be of great interest to the military man and should be of interest to the statesman and to the educated civilian.

THE AUTOBIOGRAPHY OF BENVENUTO CELLINI. Translated by John Addington Symonds. New illustrated edition. 488 pp. Published by Garden City Publishing Co. Garden City, N. Y. Price, \$1.00.

Reviewed by John Stanley

The bravest man in all Italy, the greatest artist, the finest swordsman and the most accomplished lover was Benvenuto Cellini. He tells us so himself. He admits too that in artillery he is without peer.

Benvenuto Cellini was born in Florence in 1500. He lived at a time when the Italian Renaissance was at its artistic peak. Titian and Michaelangelo were his friends and he knew the remarkable genius of Leonardo de Vinci.

Of his artistic fame we have left, unfortunately, very few evidences. We know that he was a sculptor and goldsmith of talent and that all of his claims were not mere braggadocio. In Florence in the Loggia dei Lanzi is the Perseus, the feverish casting of which Benvenuto has so vividly described. In the Metropolitan Museum in New York may be seen a magnificent gold cup, but for the rest we have only a few coins and medals. We cannot wholly support his extravagant claims to superlativeness, but he was certainly an excellent artist and his autobiography ranks with the great books of the world.

This record of his life is more exciting than any novel. He never sidestepped a quarrel whether a brawl with drunken soldiers or a defiance of the Pope himself. As a natural consequence quite a few of his days were spent in prison, but in prisons however from which he was always able to escape. Kings, Dukes, Cardinals and Popes pass in vivid array through his pages, for Cellini knew them and worked for them and inevitably quarreled with them. Even with his women he dealt tempestuously and he naively mentions the birth of an heir: "This was the first child I ever had so far as I remember."

The unfortunate Clement, then Pope, had so bungled his alliances that in 1527 came the great host of Charles V

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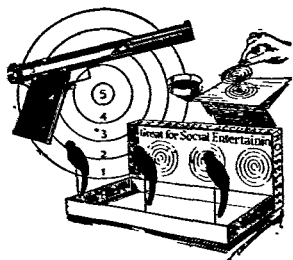
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under the celebrated renegade Constable of Bourbon, Clement VII, never very clever, had openly cheated and flouted the Emperor by whose very influence he had been elected to the Papal throne. And so Italy was being invaded and Rome marked out for plunder.

At daybreak on May 6, 1527, a general attack was being made. Cellini was engaged by Alessandro del Bene to help protect his palace. He had collected a band of some fifty men and with del Bene was reconnoitering near the walls by the Campo Santo. The Constable of Bourbon was not far away, "a splendid figure encased in full armor, with a plumed helmet, and a surcoat of cloth of silver worn outside his cuirass; a mark for every foe, but above all a shining light to guide and lead his soldiers from afar." A thick mist was rising from the Tiber and in the ensuing confusion the Duc, seeking to set an example for his men, sprang from his horse, seized a ladder and rushed to the wall.

Cellini had been boasting of his military prowess, but when his party came within sight of this formidable display they promptly turned to leave. Benvenuto, however, must needs display his vaunted marksmanship and directing his friends to watch he "aimed exactly at one whom I remarked to be higher than the rest . . . I crept cautiously up to the wall, and observing among the enemy a most extraordinary confusion, I discovered afterwards that one of our shots had killed the Constable of Bourbon; and from what I subsequently learned, he was the man whom I had first noticed above the heads of the rest." Cellini, then, had killed the commanding general of the besieging forces with his first shot. Unfortunately all the historians of the sack of Rome have not been unanimous in agreeing with him but he personally was content.

The Sack of Rome was in progress. Bereft of all restraining influence by the death of Bourbon the soldiers rushed on the defenceless people like a pack of wolves. The looting drunken soldiers raped and killed indiscriminately and no quarter was either asked or given. The gunners from their lofty stand in the Castle could see their own homes being pillaged and their families massacred. Sick with horror many of them could not work at their guns, but the intrepid Benvenuto had no such qualms and calmly began operations. With swivels and falconets he fired round after round for his aim was miraculous. Cellini modestly declares: "In my enthusiasm I strove to achieve the impossible; let it suffice that it was I who saved the castle that morning and brought the other bombardiers back to their duty."

Already now with the siege barely started our artist artilleryman had killed the opposing general and then almost single-handed saved the castle. His enthusiasm was now unbounded and he readily concluded "I was perhaps more inclined by nature to the profession of arms than the one I had adopted, and I took such pleasures in its duties that I discharged them better than those of my own art." This after he had already modestly intimated that he was probably the greatest artist in all Italy.

During the five weeks of the siege Cellini never ceased

his artillery practice. He was wounded once. At the express command of Santacroce who had wanted the best of the gunners, he left his usual post in order to fire on "certain houses of the neighborhood where certain of our besiegers were seen to enter," and while he prepared his guns a cannon shot hit the battlement and caromed off the whole mass hitting him in the chest. A friendly bandsman with a knowledge of medicine treated the wound with a hot poultice of wormwood soaked in Greek wine. It was of immediate benefit, but Benvenuto returned to consciousness spitting and cursing the "stupid soldiers" who had filled his mouth with earth thinking to give him the sacrament. He suffered no more than a bruise, declaring the dirt was of more harm than the shot.

On one momentous occasion the Pope was gazing out over the battlements and had recognized one of the enemy as having been once in his own service. Above, Benvenuto, coincidentally was watching this same man, a Spanish Colonel dressed entirely in rose color, "and so studying the worst I could do against him, I selected a gersfalcon which I had at hand; it is a piece of ordnance larger and longer than a swivel, and about the size of a demi-culverin. This I emptied, and loaded it again with a good charge of fine powder mixed with the coarser sort; then I aimed it exactly at the man in red, elevating prodigiously, because a piece of that caliber could hardly be expected to carry true at such a distance. I fired, and hit my man exactly in the middle. He had trussed his sword in front, for swagger, after a way those Spaniards have; and my ball, when it struck him broke upon the blade and one could see the fellow cut in two fair halves. The Pope who was expecting nothing of this kind, derived great pleasure and amazement from this sight . . ." It was a miraculous shot and Benvenuto could hardly be expected to make light of it.

In his spare time the militant goldsmith was engaged in melting down the Papal gold and removing from their settings the great jewels of the Apostolic Camera. While waiting for the gold to melt he amused himself shooting at the besiegers. Choosing a "swivel and a falconet which were both a little damaged in the muzzle," he filled them with scraps of metal and stones. This firing he especially enjoyed the more so because the results, always bloody, were occasionally unusual. It was while he was so enjoying himself that he occasioned the wounding of the Prince of Orange who had in part succeeded Bourbon in the supreme command. He had spied someone trotting along the margin of the trench on muleback. The mule, he says, was trotting very quickly and he aimed a bit in advance of it before firing. One fragment struck the rider.

The man was the Prince of Orange, and the still observant Cellini followed the progress of the wounded prince through the trenches to a nearby tavern where he saw "all of the chief folk of the army" gathered. In great excitement he reported to Clement and the commander, Santacroce, ordered all the bombardiers in the castle to train their guns on the inn hoping thereby to render the



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invading army leaderless. The Cardinal Orsini protested that such an act would ruin all chances for a treaty, negotiations for which had begun, and that a wholly leaderless rabble was the more to be feared. On this the orders were countermanded, but Cellini was disgusted with such warfare and let fly one of his demi-cannons for luck. The military effect was excellent, but the Cardinal Farnese promptly ordered him hanged. The Pope, "however, took up my cause with spirit." Benvenuto was not hanged.

This is the last of the incidents of the siege of Rome and of Cellini's cannoneering that he has left us, not he declares, because there were no more, but that the wishes to leave a history of his art and not of his warfare for "Forsyth, if I wanted to ornament my biography with such matters, I should have far too much to tell."

ROBERT E. LEE, THE WEST POINTER. By Major General Charles Dudley Rhodes. Richmond, Va. Garrett & Massie. 42 pp.

This volume should be classed as a work of art rather than a book. The author's sketch of Lee's career at West Point can be read in a few minutes. One will perhaps spend more time admiring the decorative drawings of J. F. DeYoung. The work is a labor of love, the entire proceeds being applied on the purchase of Stratford Hall, the birthplace of Lee, and restoring it as an historical shrine. A masterpiece of the typographer's art, this little volume is already being eagerly sought by collectors.

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THERE ARE THOSE who are so slozely shut up within a little round of petty pleasures that they have never dreamed of the fun of reading and conversing and investigating and reflecting. It is essential to awaken the impulses of inquiry, of experiment, of investigation, of reflection, the instinctive cravings of the mind. The principle underlying all our educational procedure is that actions become more successful as they pass from the sphere of feeling to that of understanding.—MEIKELJOHN.